

**On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making
and the Evolution of Individuals' Retirement Planning Decisions over Time**
ICR Reference Number: 201509-1225-001
April 2017

Supporting Statement
**On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and
the Evolution of Individuals' Retirement Planning Decisions over Time**

Table of Contents

B.	Collection of Information Employing Statistical Methods.....	2
B.1.	Respondent universe and sampling methods.....	2
B.1.a.	Respondent universe and selection methods for pretests.....	2
B.1.b.	Respondent universe and selection methods for On the Road to Retirement panel.....	8
B.2.	Procedures for the Collection of Information from the On the Road to Retirement Panel.....	12
B.2.a.	Pre-Survey.....	12
B.2.b.	Initial Participant Survey (IPS).....	15
B.2.c.	Advice Interaction Survey – Year 1 (AIS1).....	18
B.2.d.	Annual Participant Survey (APS).....	18
B.2.e.	Advice Interaction Survey – Year 2 (AIS2).....	18
B.3.	Methods to Maximize Response Rates and Deal with Nonresponse.....	19
B.4.	Tests of Procedures or Methods to be Undertaken.....	25
B.4.a.	Pretesting.....	25
B.4.b.	Sample Weights.....	27
B.4.c.	Imputations and Interval Estimates.....	30
B.5.	Analysis Plan.....	30
B.5.a.	Pretesting.....	30
B.5.b.	Pre-Survey.....	31
B.5.c.	Initial Participant Survey.....	32
B.5.d.	Advice Interaction Survey—Year 1.....	32
B.5.e.	Annual Participant Survey.....	33
B.5.f.	Advice Interaction Survey—Year 2.....	34
B.6.	Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data.....	35
	References.....	36

B. Collection of Information Employing Statistical Methods

B.1. Respondent universe and sampling methods

Retirement research lacks adequate data on how people make planning and financial decisions before and during retirement. This study proposes to undertake a long-term research study to develop a panel that will track U. S. households over several years in order to collect data and answer important research questions on how retirement planning strategies, decisions, and outcomes evolve over time.

The steps in the data collection process are as follows:

- **Pretesting** - Survey pretesting utilizing cognitive interviews, pilot surveys, and debriefing of respondents to the pilot surveys. The data generated by these pretests will be used solely for the purpose of assessing and improving the quality of the survey instruments.
- **Pre-Survey** - A mailed-out survey to recruit sample members for the Initial Participant Survey, with follow-up contacts by mail and telephone, as well as phone interviews.
- **Initial Participant Survey (IPS)** questionnaires administered via Internet, mail, and telephone.
- **Advice Interaction Survey (AIS)** questionnaires administered quarterly via Internet, mail, and telephone.
- **Annual Participant Survey (APS)** questionnaires administered annually via Internet, mail, and telephone.

B.1.a. Respondent universe and selection methods for pretests

Pretests will be conducted to assess and improve the quality of the survey instruments. The pretesting will utilize cognitive interviews, pilot surveys, and debriefing of respondents to the pilot surveys.

A total of 30 individuals will participate in cognitive interviews. At least 360 additional individuals will respond to pilot surveys. In all, five different survey questionnaires will be pretested: (1) Internet IPS Baseline, (2) Internet IPS Follow-Up, (3) Mail/Telephone IPS, (4) Internet AIS, and (5) Mail/Telephone AIS. Each pilot survey respondent will be asked to complete either the three questionnaires administered via Internet or the two surveys administered via mail and/or telephone. Almost one-third of these respondents will be selected to participate in debriefing interviews.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

Here we describe the methods for selection of participants in the cognitive interviews, pilot survey interviews, and debriefing interviews. We describe the pretest procedures in Section B.4 (“Tests of Procedures or Methods to be Undertaken”) and the methods for analyzing the pretest results in Section B.5 (“Analysis Plan”).

Cognitive Interviews

We will conduct a total of 30 cognitive interviews. Participants will be recruited by a commercial vendor that keeps lists of individuals who have previously agreed to be contacted regarding participation in interviews. Cognitive interviews will be conducted in Washington, DC, drawing respondents from the District of Columbia, Maryland, and Virginia who live and/or work in the Washington metropolitan area. The list of potential participants has been compiled over many years by the vendor. It includes individuals who have participated in prior studies, as well as individuals who have not yet participated but have previously expressed interest in doing so in response to recruitment efforts for market research studies and/or after learning about the opportunity through word-of-mouth.

To recruit a nonprobability quota sample of participants, the vendor will attempt via telephone to contact individuals on a call list. The recruiter will administer a brief questionnaire to determine eligibility for the cognitive interviews. This questionnaire—the “Recruitment Screener”—is attached as Appendix 2.

Individuals must be at least 25 years old in order to participate. We have set recruitment targets based on the participant’s retirement plan(s), financial advising, household financial responsibilities, labor force status, age, gender, race/ethnicity, and educational attainment as follows:

- Retirement Plans and Advising:
 - At least 4/5 have an account in an employer-sponsored defined contribution (DC) retirement plan, hold an IRA, and/or use a financial adviser for retirement planning.
- Retirement Plans:
 - At least 2/5 have an account in an employer-sponsored defined contribution retirement plan.
 - At least 2/5 hold an IRA
- Financial Adviser:
 - At least 1/3 use a financial adviser for retirement planning.
- Household Financial Responsibilities: at least 2/3 with some responsibility for making long-term saving and investment plans.

**On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making
and the Evolution of Individuals' Retirement Planning Decisions over Time**
ICR Reference Number: 201509-1225-001
April 2017

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

- o Labor Force Status:
 - No more than 1/5 retired.
 - No more than 1/5 self-employed.
 - At least 1/2 working for someone else.
- o Age: At least 1/4 in each of three categories—25-40, 41-55, 56+.
- o Gender: At least 1/3 women, but no more than 2/3
- o Race: At least 1/3 white, non-Hispanic, but no more than 4/5.
- o Education: At least 1/5 “Bachelor’s degree” or higher, but no more than 4/5.

The responses to the recruitment screening questionnaire will be used to track progress toward meeting these targets and to determine when any targets have been reached. Best efforts will be made to reach each of these targets in order to obtain a collection of 30 participants with a wide range of experiences and backgrounds that may lead to differences in how they interpret and how well they understand the key concepts and terminology of interest in the On the Road to Retirement Study surveys. These surveys will be administered to U.S. households that include at least one individual who is at least 25 years of age.

Participants will be offered a financial incentive of \$40 to be paid upon completion of the cognitive interview. Based on our prior experience recruiting for focus groups and individual interviews, as well as discussions with potential vendors, we believe that intensive efforts will be required in order to recruit 30 participants with a \$40 incentive. We anticipate a participation rate of less than 5% among eligible individuals who are contacted by a recruiter.

The findings from the cognitive interviews will be qualitative in nature and will only be applied to the sample of participants. The selection mechanism will not obtain a representative sample of a broader population, and it has not been designed to do so. Rather, a range of participant backgrounds is desired in order to increase the likelihood of identifying areas of concern that would arise when the surveys are administered to thousands of On the Road to Retirement Study households across the United States. However, another key factor in determining the targets is the desire to include participants who have some familiarity with the central behaviors of interest that distinguish this study from others, such as participation in an employer-sponsored DC plan, use of a financial adviser for retirement planning, and personal responsibility for making long-term saving and investment plans.

Pilot Surveys and Respondent Debriefing

Potential respondents to the pilot surveys will be selected from among all active respondents to the RAND American Life Panel (ALP) (see <https://mmicdata.rand.org/alp/>). We will attempt to survey 465 ALP panel members from 16 different strata defined by the respondent’s age, living

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

situation, and employment status. Of the 465 attempted surveys, 375 will be Internet surveys and 90 will be mail-out surveys, as described in Table 6. Appendix 3 contains drafts of cover letters and email messages to be sent to potential participants.

Table 6. Breakdown of Sample by Survey Mode

Respondent Living Situation and Age	INTERNET SURVEYS				MAIL-OUT SURVEYS			
	Respondent Labor Force Status				Respondent Labor Force Status			
	Labor Force Participant	Retired	Other		Labor Force Participant	Retired	Other	
Living with a spouse or partner								
Age 25-40	62	0	13	75	11	0	3	14
Age 41-55	62	4	13	79	11	4	3	18
Age 56+	38	31	13	82	11	11	3	25
Not living with a spouse or partner								
	Labor Force Participant	Retired	Other	Total	Labor Force Participant	Retired	Other	Total
Age 25-40	31	0	6	37	6	0	2	8
Age 41-55	31	3	6	40	6	2	3	11
Age 56+	25	31	6	62	6	5	3	14
TOTAL	249	69	57	375	51	22	17	90

Findings from the analysis of ALP survey responses will generally be qualitative in nature and will only be applied to the sample of participants. A range of participant backgrounds is desired in order to increase the likelihood of identifying areas of concern that would arise when the On the Road to Retirement surveys are administered to thousands of households across the United States. Even with hundreds of pretest participants, simple random sampling from the list of over 5,300 ALP panel members who are age 25 and older may not suffice to achieve this objective. Table 7 compares the proposed stratification of the pretest sample to the universe of active ALP respondents. The pretest sample will be randomly selected from within each stratum of ALP respondents.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

Table 7. Proposed Sample and Universe Covered

Respondent Living Situation and Age	PROPOSED SAMPLE				UNIVERSE COVERED			
	Internet + Mail-Out Surveys				All Active ALP Respondents			
	Respondent Labor Force Status				Respondent Labor Force Status			
Living with a spouse or partner	Labor Force Participant	Retired	Other		Labor Force Participant	Retired	Other	
Age 25-40	73	0	16	89	827	1	177	1,005
Age 41-55	73	8	16	97	843	19	180	1,042
Age 56+	49	42	16	107	530	529	121	1,180
Not living with a spouse or partner	Labor Force Participant	Retired	Other	Total	Labor Force Participant	Retired	Other	Total
Age 25-40	37	0	8	45	569	1	64	634
Age 41-55	37	5	9	51	508	10	126	644
Age 56+	31	36	9	76	333	372	121	826
TOTAL	300	91	74	465	3,610	932	789	5,331

The content of the On the Road to Retirement surveys varies considerably depending on the respondent's living situation and labor force participation status. The sampling strata and sampling rates were designed to ensure that respondents will be selected from the smaller strata among those not participating in the labor force, while about two-thirds of survey pretest respondents will be labor force participants at different points on the road to retirement. About 20 percent of participants will be retirees.

Participants will be offered a financial incentive of \$20 to be paid upon completion of each survey. This amount is consistent with standard ALP practice for similar surveys. This level is also roughly equivalent to the incentives provided by the Health and Retirement Study and the Panel Study of Income Dynamics for comparable survey interview time.

We will utilize the standard protocol of automated follow-up contacts for ALP Internet interviews to maximize the response rate, which we expect to be at least 80%, yielding a total of at least 300 respondents. The standard protocol includes a weekly e-mail reminder. For surveys that are more time-sensitive, such as these pretests, the protocol adds a second weekly reminder that specifies the forthcoming date at which the survey will be "closed."

**On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making
and the Evolution of Individuals' Retirement Planning Decisions over Time**
ICR Reference Number: 201509-1225-001
April 2017

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

For the mail-out surveys, the panel manager will also contact potential respondents via phone and/or e-mail with personal messages to encourage participation. Phone calls will begin three weeks after the surveys are mailed out. This extra effort will be utilized for the mail-out surveys, because ALP respondents typically complete surveys only via Internet. Telephone interviews will be available as an option to those who receive the mail-out surveys, as will be the case when the surveys are ultimately fielded for the On the Road to Retirement study.

We anticipate a response rate of about 67% for the mail-out surveys, yielding a total of approximately 60 completed mail-out surveys. ALP surveys are rarely mailed out, so this rate is much more uncertain than the response rate to the surveys that will be administered via Internet. However, a recent example should be instructive. Most ALP panel members have participated in the Survey of Consumer Payment Choice (SCPC), sponsored by the Federal Reserve Bank of Boston. SCPC respondents have been asked to complete a diary of financial expenditures over a three-day period. In 2011, the diaries were mailed out to respondents, and 318 survey respondents were asked to return the completed forms. More than 80% (264 out of 318) did so.

We will attempt to conduct debriefing interviews with almost one-third of the survey respondents—20 from each of the five questionnaires. Potential participants will be randomly selected from among those who are eligible for each survey and who have not yet participated in one of the debriefing interviews for an earlier survey. If necessary, the latter requirement will be relaxed to meet the target of 20 debriefing interviews for each survey. We expect a participation rate of better than 50%. This estimate is also based on a recent study for the SCPC. In particular, 45 ALP panel members were asked to participate in telephone interviews in December of 2013, and 25 agreed to do so within two weeks of the initial request. Only 15 interviews were required, and therefore 15 of the 25 were subsequently interviewed.

We will encourage a representative sample of pilot survey respondents to participate in the debriefings by highlighting the importance of their role in determining the success of this important study. In addition, participants will be offered a financial incentive of \$30 to be paid upon completion of the debriefing. The debriefing interviews will typically require no more than 30 minutes to complete, but some interviews may extend well beyond 30 minutes. Further, extra effort is required to set up and complete the telephone interviews as opposed to the Internet interviews that ALP panel members typically complete. The incentive level of \$30 was chosen to ensure that we obtain a sufficient number of participants in a relatively short time frame with a relatively small pool of eligible individuals in some cases, such as the mail-out surveys.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

B.1.b. Respondent universe and selection methods for On the Road to Retirement panel

The target population for the Initial Participant Survey will be households in the United States with at least one household member who is age 25 or older. Sampling from this population will take part in two stages: (1) administration of a “Pre-Survey” of an address-based sample from the general population to determine eligibility for participation in the study and (2) stratified sampling of Pre-Survey respondents who are eligible to participate in the study—i.e., respondents who reside in a household that includes at least one member who is age 25 or older.

We expect to obtain completed surveys from approximately 10,000 households out of the 25,000 households included in the address-based sample.¹ Of these 10,000 respondents, we expect that at least 9,500 of these households will be eligible to participate in the study.² With a target sample size of 4,500 for the Initial Participant Survey, RAND’s experience with the ALP indicates that we may not need to attempt to contact every member of this pool. With a larger pool than necessary, we can stratify and oversample certain groups—e.g., individuals in their 50s and 60s—to be better able to address the key topics of interest—e.g., decision making during the transition to retirement. In particular, we will aim for target samples sizes based on the age of the oldest member of the household, as reported in the Pre-Survey. Table 8 lists the targets.

1 RAND utilized a similar sampling protocol to expand the ALP to increase representation of vulnerable groups and minorities. For this purpose, RAND targeted ZIP-code areas that have disproportionately large numbers of minorities or lower-income persons. This recruitment effort generated a pre-survey response rate of 29%, with approximately one-fifth of the nonrespondent addresses having been undeliverable mail. We believe that the general population response rate will be substantially higher—in particular, 40%. The Pre-Survey will be administered by DataStat, Inc. Representatives from DataStat have agreed, based on their experience, that the target response rate of 40% can be achieved utilizing the IPS recruitment protocol described below in Section B.2.a.1.

2 Current Population Survey data from 2011 indicate that 5.2 percent of “householders,” defined by the U.S. Census Bureau as “a person in whose name the housing unit is rented or owned” (<http://www.census.gov/hhes/families/about/>), are under age 25. See “Table 14. Households by Type and Age of Householder: 2011,” available at <http://www.census.gov/population/age/data/2011comp.html>. Some of these householders live in households with an individual who is age 25 or older.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

Table 8. Target Sample Sizes, by Age: On the Road to Retirement Panel

Age of Oldest Member of the Household	Target Sample Size
25-34	700
35-44	850
45-54	1,050
55-64	1,050
65 or older	850
Total	4,500

All IPS households will be eligible to complete AIS interviews to be administered quarterly. All IPS households will also be eligible to complete the Annual Participant Survey to be administered each year following the IPS. Table 9 lists each data collection effort and the expected response rate.

Table 9. Respondent Universe and Expected Response Rates: On the Road to Retirement Panel

Data Collection Effort	Respondent Universe	Expected Response Rate	Expected Number of Participants	Eligible Participants
Pre-Survey	25,000	40%	10,000	9,500
Initial Participant Survey (IPS)	9,500	47%	4,500	4,500
Advice Interaction Surveys Year 1 (AIS1)	4,500	94%	4,250	4,250
Annual Participant Survey (APS)	4,500	91%	4,075	4,075
Advice Interaction Surveys Year 2 (AIS2)	4,500	90%	4,035	4,035

As described above, On the Road to Retirement sample recruitment begins with a sample of 25,000 households, the “Respondent Universe” for the Pre-Survey. We expect to receive completed questionnaires from 10,000 of these households, approximately 95% of which will be eligible for the study (i.e., living in households with at least one member who 25 years of age or older). Table 9 reports the original sample of 25,000 households as the “Respondent Universe”

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

for the IPS, with a target sample size of 4,500. Only IPS respondent households are eligible for subsequent surveys. Therefore, Table 9 uses the 4,500 IPS households as the “Respondent Universe” for these subsequent interviews.

The expected response rates reported in Table 9 reflect annual attrition rates of less than 10%. This low attrition rate, which RAND has achieved in the ALP, is undoubtedly related to the relatively generous incentive to respond—\$20 after completion of a 30-minute interview—that will be adopted in the present study as well.

Table 10 below provides power calculations for the On the Road to Retirement panel. For simplicity, the calculations pertain to one-sample proportion tests examining our ability to test a hypothesis that a certain fraction of the sampled population features some characteristic, such as mutual fund ownership. To be conservative, each calculation utilizes a null hypothesis of 0.5 for the population proportion of interest. For proportions hypothesized to be closer to zero or one, smaller effects would be detected.

The first three columns of entries in Table 10 contain calculations for the full sample of households. The next three columns contain calculations for households in which a member or members own assets in a dedicated retirement account, such as an employer-sponsored DC plan or an IRA. A recent analysis of data from the Survey of Consumer Finances (SCF) indicates that about half of all U.S. families own assets in such a retirement account (Bricker *et al.*, 2014).³ Based on differences in the definition between “family” and “household,” as well as the broader sampling frame of the SCF, it is likely that more than half of the Road to Retirement panel households will own retirement account assets. To be conservative, however, the calculations below are made under the assumption that half of panel households own such assets. Note that no power calculations have been made for this subgroup of Pre-Survey respondents, because this questionnaire will not elicit responses concerning retirement account assets.

³ Bricker *et al.* (2014) define “retirement accounts” as follows: “Retirement accounts include IRAs, Keogh accounts, and certain employer-sponsored accounts, such as 401(k), 403(b), and thrift savings accounts from current or past jobs; other current job plans from which loans or withdrawals can be made; and accounts from past jobs from which the family expects to receive the account balance in the future” (p.33).

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

Table 10. Minimal Substantively Significant Effect Sizes: One-Sample Tests of Proportions

Data Collection Effort	All Households			Households with Assets in a Retirement Account		
	Expected Sample Size	Minimum Detectable Effect Size (.8 power)	Minimum Detectable Effect Size (.9 power)	Expected Sample Size	Minimum Detectable Effect Size (.8 power)	Minimum Detectable Effect Size (.9 power)
Pre-Survey	9,500	1.4%	1.7%	N/A	N/A	N/A
Initial Participant Survey (IPS)	4,500	2.1%	2.4%	2,250	3.0%	3.4%
Advice Interaction Surveys Year 1 (AIS1)	4,250	2.1%	2.5%	2,125	3.0%	3.5%
Annual Participant Survey (APS)	4,075	2.2%	2.5%	2,038	3.1%	3.6%
Advice Interaction Surveys Year 2 (AIS2)	4,035	2.2%	2.6%	2,018	3.1%	3.6%

These calculations are made using customary methods for power calculations based on the asymptotically normal distribution of the following test statistic:

$$z = \frac{\hat{p} - p_0}{\sqrt{\left(\frac{p_0(1-p_0)}{n} \right)}}$$

where $\hat{p}$ is the sample proportion and p_0 is the hypothesized proportion—i.e., $|\hat{p} - p_0|$ is the “effect size”—and n is the sample size. The calculations set p_0 equal to 0.5 and use the critical value of about 1.96 corresponding to a two-tailed hypothesis test at the 5% significance level. Then,

$$Power = (\Phi(|z| - 1.96))$$

where $\Phi(\cdot)$ is the standard normal cumulative distribution function.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

The estimated minimum substantively significant effect sizes for the full sample of households, at the 5% level and powers of 0.8 and 0.9, are 1.4 percent and 1.7 percent, respectively, for the Pre-Survey, and range from 2.1 to 2.6 percent over the course of the panel study beginning with the Initial Participant Survey. The reported estimates increase by about one percentage point when attention is restricted to households with retirement account assets, ranging from 3.0 to 3.6 percent.

B.2. Procedures for the Collection of Information from the On the Road to Retirement Panel

B.2.a. Pre-Survey

In the first stage of IPS respondent recruitment, we will select a sample size of 25,000 from post office delivery sequence files provided by a commercial vendor. This sample frame has essentially universal coverage of the U.S. population. Many of the sampled addresses will include the name of a resident, in which case the Pre-Survey will be addressed to that individual's household. The others will be addressed to "Household Residing At." The Pre-Survey cover letter instructs the recipient to complete the questionnaire, unless another member of the household is much better able to answer questions about the household's finances, in which case that other household member should complete the questionnaire. DataStat, Inc., of Ann Arbor, Michigan (<http://www.datastat.com>) will administer the Pre-Survey.

IPS Recruitment

The recruitment process will involve a number of steps to determine eligibility for and interest in participating in the panel: (1) initial notification letter concerning a brief survey forthcoming by mail in the week ahead; (2) Pre-Survey packet with a cover letter, a brief questionnaire, a financial incentive, and a postage-paid return envelope; (3) nonrespondent follow-up contacts via mail; and (4) nonrespondent follow-up contacts via telephone. Respondents who return a completed questionnaire will receive a financial incentive.

Initial Notification Letter

A draft of the notification letter is included as Appendix 4. The letter will be printed in English with Department of Labor letterhead and signed by Joseph Piacentini, Director of Policy and Research at the Employee Benefits Security Administration. The first paragraph of the letter notifies the recipient that he or she will be receiving a brief questionnaire "in a few days." It describes the \$5 compensation to be paid in advance and the \$10 check that will be mailed after a completed survey has been returned to DataStat. The paragraph concludes by describing the

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

purpose of the study: “to collect information on how households make important decisions from early in their working lives all the way into retirement.” The results of the study are described as providing “valuable information to understand and improve the situation of individuals and families in the United States.”

The second paragraph of the letter explains that the household was selected randomly. It notes that “the accuracy of the results depends on getting answers from your household and other households like yours that were selected for this survey.”

The subsequent paragraphs offer information about the public release of data, data-sharing arrangements, and household participation. In particular, the letter states:

“Your survey responses will be used for research and statistical purposes by the Department of Labor and contractors and researchers working with us on this study. We will keep your identity private to the extent permitted by law. The Department of Labor intends to release a public data file with information obtained from this survey, but will do so in a way that protects the privacy of individual respondents. For example, released data will not include any personally identifying information, such as your name and address. The project team includes researchers from DataStat, Resolution Economics Group LLC, the University of Southern California, and RAND Corporation, a non-profit research organization.

Your participation is voluntary, and your decision to participate or not to participate will not affect your standing or relationship with the U.S. Department of Labor in any way. Your experiences and opinions will provide policy makers with valuable information; therefore, we hope you will choose to participate.”

The letter concludes by providing a toll-free phone number for questions about the study.

Pre-Survey Packet: Cover Letter

A draft of the Pre-Survey cover letter is included as Appendix 5. This letter will also use Department of Labor letterhead and be signed by Joseph Piacentini. The first paragraph of the letter reminds the recipient of the notification letter. It also describes the purpose of the study using the same language as is found in the notification letter.

The second paragraph explains that the household was selected randomly and appeals to the recipient for assistance using the same language as is found in the notification letter. The questionnaire is described as taking “probably 10 minutes or less” to fill out. The recipient is instructed to ask another member of the household to complete the questionnaire if he or she “is

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

much better able to answer questions about your household's finances.”

The third paragraph begins by describing the financial compensation, both the enclosed \$5 bill and the \$10 check that will be sent after the completed questionnaire is returned in the enclosed, postage-paid envelope. This information is followed in the fourth paragraph by a description of the data to be publicly released and of the data-sharing arrangement within the “project team” using the same language as in the notification letter. The subsequent paragraph describes the voluntary nature of participation, followed by another appeal for assistance. The letter concludes by providing the toll-free phone questions about the questionnaire.

Pre-Survey Packet: Questionnaire

The Pre-Survey will collect information about household composition, housing, and respondent attributes, including age, sex, race, ethnicity, language, and employment status (see Appendix 7). Many of these questions are taken directly from the 2013 American Community Survey administered by the U.S. Census Bureau. The responses to the questions will be useful for the purpose of assessing the representativeness of the Pre-Survey sample and for constructing sample weights. Some of the baseline information will also be pre-loaded into future questionnaires to determine question-wording and question-branching algorithms. For example, future question text or the sequence of questions may vary depending on whether the respondent is living alone or living with a spouse or with a partner. The subsequent questionnaires will include a request to review this pre-loaded information for accuracy and changes.

The Pre-Survey also includes a few questions concerning knowledge of household finances, financial decision making, and financial advice. This information will be used to determine whether the respondent is the most appropriate member of the household to participate in future interviews. If not, efforts will be made to recruit the more appropriate respondent in future interviews. However, no household will be dropped from the sample based on whether or not the respondent is deemed to be the “more appropriate respondent.” This information will also be valuable for assessing the effects of unit nonresponse to the IPS, which focuses on questions about household financial decision making and financial advice.

Finally, Pre-Survey respondents will be asked to indicate whether they are willing to be contacted again to participate in future surveys, as well as to provide email and telephone contact information. This information will be used to determine how the Initial Participant Survey contact efforts will be made (i.e., by regular, email, and/or phone).

Nonrespondent Follow-Up Contacts

Approximately two weeks after the survey mailing, nonrespondents will be mailed a reminder postcard. Approximately two weeks after the reminder postcard is mailed, a second copy of the

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

Pre-Survey will be mailed to all sample members who have not yet returned a completed survey. Approximately three weeks after the second copy of the Pre-Survey is mailed, DataStat will initiate telephone follow-up contact efforts to all sample members who have not yet returned a completed survey and for whom we have a telephone number. Respondents will be given the opportunity to complete the questionnaire over the phone. Telephone calls will follow a very thorough protocol that includes a minimum of eight callback attempts at systematically varied times of day and days of the week to the available telephone numbers until final disposition. In addition, interviewers will make one attempt to “convert refusals into completions”—i.e., attempt to convince sample members to complete the questionnaire after initially declining to do so.

We expect that telephone numbers will be available for about half of the sample. These numbers will be primarily, if not exclusively, for landline phones.

Respondent Payments

Individuals who send in the completed questionnaire will be mailed a check for \$10 as a thank you for completing the survey.

B.2.b. Initial Participant Survey (IPS)

The Pre-Survey respondent households that are found to be age-eligible to participate in the study will be sent a welcome packet for the Initial Participant Survey. The welcome packet will include information on how to securely log in to the panel study website and to sign in to complete the IPS interview via Internet. Log-in information will also be emailed to those individuals who provided an e-mail address.

The Internet interviews will include the Internet IPS Baseline and the Internet IPS Follow-Up about two weeks later. The baseline interview will collect a range of information of central interest to this study, including questions regarding (a) eligibility for and participation in retirement plans, (b) use of a professional financial adviser, and (c) holding of IRAs. The follow-up interview will address issues of central interest to this study that are likely of increased sensitivity. In the process of conducting multiple interviews over time, we hope to build some trust with the respondents and hence increase response rates while also serving to maintain contact in order to reduce attrition, as we have found to be the case with the American Life Panel. Further, by breaking down the questionnaire into smaller modules administered at different points in time, we reduce the burden placed on respondents on any one day.

However, the benefits of conducting multiple interviews are not quite as apparent when we consider mail and telephone interview modes, and the costs to administer such surveys will be considerably greater. Therefore, we have developed a single, comprehensive questionnaire for

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

the Mail/Telephone IPS interviews.

Welcome Packet

The welcome packet will include a letter printed in English with DOL letterhead and signed by Joseph Piacentini. A draft of the cover letter for potential respondents to the Mail/Telephone IPS is included as Appendix 6. It will be addressed to the respondent who completed the Pre-Survey.

The letter begins by thanking the recipient for completing the Pre-Survey and for agreeing to being contacted again.⁴ It then describes the goals and structure of the On the Road to Retirement Study, including the schedule of interviews “for the next two years or more” and the financial compensation to be paid for completing interviews. Much of the rest of the content of the letter closely resembles the content of the Pre-Survey cover letter, including the discussion of the purpose of the study, how the household was selected, the voluntary nature of participation, and how the data will be used and shared.

The recipient is instructed to ask another member of the household to complete the questionnaire if he or she “is much better able to answer questions about your household’s finances.” If responses to the Pre-Survey indicate that another household member is the more appropriate respondent, then the letter will ask that this other household member complete the questionnaire. However: “If that is not possible, we would still welcome and greatly appreciate your participation.”

The letter reports that “the survey is estimated to require an average of 30 minutes to complete” and notes that a \$20 check will be sent after the questionnaire is returned. The letter concludes by mentioning the possibility of completing the interview via Internet, and provides the web address, username, and password in order to do so.

Internet IPS Baseline Interview

The Internet IPS Baseline interview will require approximately 25-35 minutes to complete. Respondents will be paid \$20 for a completed interview. Included among the questions will be sections on retirement savings behavior and on financial advice (see Appendix 8).

4 For those Pre-Survey respondents who did not express interest in future surveys, the phrase “and we are very pleased that you agreed to allow us to contact you again” will be replaced by the following text: “and we would like to invite you to participate in another survey.”

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

Internet IPS Follow-Up Interview

The Internet IPS Follow-Up interview will occur approximately two weeks after the IPS Baseline interview and will require approximately 15-25 minutes to complete (see Appendix 9). Respondents will be paid \$15 for a completed interview.

Mail/Telephone IPS Interview

The mail-out IPS Interview will be wholly contained in one packet, unlike the Internet interview that is divided into a baseline and a follow-up interview. The Mail/Telephone IPS interview will require approximately 25-35 minutes to complete. The survey includes the questions asked in the Internet IPS Baseline interview (see Appendix 10). Respondents will be paid \$20 for a completed interview.

As noted above, the Mail/Telephone IPS cover letter offers the option to instead complete the interview via Internet. In addition, the letter provides a contact telephone number to reach an interviewer who will offer to conduct the interview on the phone while the respondent looks at, and perhaps fills in, the hard-copy mail-out questionnaire. After completing the Mail/Telephone IPS Interview, households may later choose to participate via Internet and would be eligible to complete the Internet IPS Follow-Up Interview or any subsequent interview that has not already been completed via mail or phone.

The text of the Telephone IPS Interview will adhere as closely as possible to the text of the Mail IPS Interview, and will also be a single interview. As is described in Appendix 10, the Mail/Telephone IPS interview will include much of the content from the Internet IPS Baseline questionnaire plus Internet IPS Follow-Up questions about health insurance and long-term care insurance, as well as about hypothetical willingness to provide documents related to IRAs or DC plans.

Nonrespondent Follow-Up Contacts

Several days after the welcome packets have been mailed, a welcome email will be sent to Pre-Survey respondents who provided email addresses but have not yet logged in to the study. Much of the information will be identical to that provided in the welcome packet, which will be referenced in the email. A hyperlink to the log-in site will be provided.

A protocol of reminder emails, mailed postcards, and phone calls will be developed to reach the desired response rate. Included in this protocol will be the opportunity for the recipient to request to be mailed a hard copy of the survey and/or to complete the survey via telephone. This protocol will also include an unsolicited mailing of a hard copy of the survey to nonrespondents

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

who provided usable email addresses.

For those Pre-Survey respondents who did not provide an email address (or whose “welcome email” bounced back) and who have not yet logged in to the study within three weeks of the welcome packet mailing, a hard-copy questionnaire will be sent to the home address. In follow-up phone calls to nonrespondents who have been mailed a hard-copy questionnaire, the interviewer will offer the opportunity to conduct the interview on the phone while the respondent looks at, and perhaps fills in, the hard-copy or Internet questionnaire.

B.2.c. Advice Interaction Survey – Year 1 (AIS1)

Approximately two months after the Internet IPS Baseline interview, we will attempt to conduct an Internet AIS1 interview of every Internet IPS respondent (see Appendix 11). We will attempt to conduct three follow-up Internet AIS1 interviews during the first year of AIS interviews.

We will attempt to conduct a Mail/Telephone AIS1 interview approximately two months after the Mail/Telephone IPS interview. This interview will include almost all of the questions from the Internet AIS1 survey (see Appendix 12). The omitted questions from the Internet AIS1 survey will be those questions eliciting details to changes since the preceding interview in the household's living situation and employment status, several follow-up questions concerning retirement finances and financial information or advice, as well as a second series of questions about advice related to retirement received from a professional in the past three months. We will also send out quarterly follow-up AIS1 questionnaires by mail to these respondents.

B.2.d. Annual Participant Survey (APS)

The APS will closely mirror the Initial Participant Survey. The Internet survey instrument will incorporate pre-loaded information from the Initial Participant Survey and the Advice Interaction Survey. This information may be used to reduce the burden on the respondent, to prompt respondents and therefore improve data quality, and to systematically identify potential errors in the data. See Appendices L, M, and N.

B.2.e. Advice Interaction Survey – Year 2 (AIS2)

The AIS2 interviews will be identical in design to the AIS1 interviews described above.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

B.3. Methods to Maximize Response Rates and Deal with Nonresponse

The primary methods to maximize response rates and deal with nonresponse will be (1) following best practices in panel recruitment and maintenance as determined based on survey research findings and the project team's extensive experience leading national panel surveys and (2) paying participants a financial incentive. The extensive, systematic efforts to recruit On the Road to Retirement Panel members are described above in Section B.2. We believe that financial incentives are a crucial component of these efforts to obtain acceptable rates of participation in this panel study, both in terms of the initial recruitment of respondents and in terms of attrition. Providing incentives in panels is a best practice and there is ample evidence that this practice helps to limit attrition (see e.g., Göritz, 2006; Millar and Dillman, 2011). Moreover, evidence suggests that incentives have a positive effect on representativeness and data quality (see, e.g., Mack et al., 1998). The incentives that we plan to offer for the IPS, AIS, and APS interviews are in line what we have used for ALP interviews.⁵

Our project team has extensive experience with recruiting and maintaining panels of respondents. The most relevant experience is our work with the RAND American Life Panel. Panel management includes a helpdesk using a sample management system that stores contact information of panel members, the surveys they have completed, and payments for surveys they have received. Data in the sample management system are stored encrypted on a secure server. Answers given to the survey interviews are stored on a different server, separate from the data in the sample management system. The sample management system keeps track of the current status of respondents and rules that determine the selection of a respondent for an interview. The system includes custom reports on respondent participation, a system to send out survey reminders and a callback scheduler to follow up by phone with respondents who did not respond to a survey.

As described above, sample recruitment will begin with a Pre-Survey that includes a \$5 payment in advance and a \$10 payment following submission of the completed questionnaire. In a meta-analysis of mail surveys, Church (1993) found that prepaid monetary incentives yielded an average increase in response rate of 19.1 percentage points over the rate obtained with a comparison group given no incentive. Other forms of incentives—nonmonetary and/or postpaid—yielded much smaller increases. He concluded that “monetary incentives included in the initial mailing (MI) should be the method of choice for improving respondent return rates” (Church, 1993, p. 75). One decade later, Edwards et al. (2002) reviewed 292 studies and concluded that response rates to mail surveys with monetary incentives more than doubled the rates obtained without incentives, with prepaid incentives yielding almost double the response

⁵ See Laurie and Lynn (2008) for a summary of incentives paid in other surveys.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

rate generated with equivalent incentives to be paid upon completion of the survey. Finally, Singer and Ye (2013) examined evidence on the effects of incentives in mail surveys produced over the subsequent decade and concluded that, in general, the results of these studies “are consistent with the conclusions reported by Church (1993) and Edwards et al. (2002).”

For panel retention, incentives are equally important, but it is less clear from the available evidence that these incentives need to be prepaid as well. We expect that annual attrition rates will be less than 10%. This low attrition rate, which RAND has achieved in the ALP, is undoubtedly related to the relatively generous incentive to respond—\$20 after completion of a 30-minute interview—that will be adopted in the On the Road to Retirement panel study as well.

In the summary of their review, Singer and Ye (2013) report three main conclusions regarding the effect of monetary incentives on response rates, as follows:

- “1. Incentives increase response rates to surveys in all modes, including the Web, and in cross-sectional and panel studies.
2. Monetary incentives increase response rates more than gifts, and prepaid incentives increase them more than promised incentives or lotteries, though they are difficult to implement in Web surveys.
3. There is no good evidence for how large an incentive should be. In general, though response rates increase as the size of the incentive increases, they do so at a declining rate” (Singer and Ye, 2013, p. 134).

Following the recommendations made in these studies and what has become standard, best practices in survey research, our proposed protocol for initial sample recruitment includes a prepaid incentive and a postpaid incentive, as well as other procedures that have been shown to increase response rates, including pre-notification letters, follow-up contacts, and mailing of a second questionnaire to nonrespondents—see, for example, Edwards et al. (2002). With this protocol, we anticipate a response rate of 40%—10,000 out of 25,000. The total amount of the Pre-Survey monetary incentives would then be no more than \$225,000, with \$150,000 paid out to 10,000 Pre-Survey respondents (\$5 prepaid plus \$10 postpaid) and no more than \$75,000 paid out to 15,000 Pre-Survey nonrespondents.⁶

The prepaid incentive of \$5 is a key component of the protocol. Without the prepaid incentive, the available evidence indicates that the response rate would fall substantially, even if we were to increase the postpaid incentive by \$5 to a total of \$15 in order to compensate. With such a revision to the protocol, the response rate would likely fall by at least 10 percentage points. Such a revision would save a substantial amount of money on the front end, but other recruitment costs would increase substantially as many additional follow-up contacts via mail and telephone would be required.

⁶ Some fraction of the 25,000 sample recruitment letters will be returned as undeliverable.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

One alternative recruitment protocol to consider would be to use the monetary savings obtained by dropping the prepaid incentive to increase the amount of the postpaid incentive by more than just the offsetting \$5. While it is difficult to know what it would take, there must be some dollar amount of a postpaid incentive that would generate a 40% response rate with no prepaid incentive but with the remainder of our protocol in place. The required increase in the postpaid incentive would likely be more than another \$7.50—i.e., a total postpaid incentive of more than \$22.50—in which case this revised protocol would necessarily increase the total amount of monetary incentives paid out for sample recruitment.

For example, a postpaid incentive of \$25 might suffice, but then the amount of monetary incentives paid for the Pre-Survey would total \$250,000, for an increase of \$25,000. Further, a postpaid incentive of more than \$20 for completion of a less-than-10 minute survey would likely have a deleterious effect on attrition, because the incentives paid upon completion of subsequent interviews—\$20 after completion of a 30-minute interview—would become relatively less generous. We would then likely be required to increase the incentives paid for subsequent interviews in order to obtain the desired response rates. With more than 20,000 separate interviews to be conducted each year, the annual amount of incentives paid would increase by more than \$100,000 even if would only needed to increase the per interview payment by \$5 as a result of the change in protocol.

Of course, even with our best efforts to recruit and retain respondents, we must be concerned about nonresponse. Questions about respondent demographics and household composition included in the Pre-Survey allow us to directly assess the impact of Pre-Survey nonresponse on the representativeness of the sample, by comparing sample statistics to benchmark national estimates from larger surveys.

In particular, we will compare sample statistics on the respondent's age, gender, race, ethnicity, marital status, and current employment status, as well as household composition and location, to the most comparable national estimates available from the American Community Survey (ACS) and the Current Population Survey (CPS). To assess the impact of nonresponse on the socioeconomic composition of the Pre-Survey sample of respondents, we will utilize Census estimates of education, income, and occupational distribution by geographic area—e.g., defined by zip code—to compare respondents to nonrespondents.

We will report on our analysis of nonresponse to the Pre-Survey—both unit nonresponse and item nonresponse—in the Initial Participant Survey Report. This report will also include an analysis of nonresponse to the IPS, including both nonresponse to the IPS interview conditional on response to the Pre-Survey and the cumulative nonresponse over the two stages. Our analysis of the second stage of nonresponse—i.e., nonresponse to the IPS interview conditional on response to the Pre-Survey—will focus on a direct comparison of respondents to nonrespondents

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

in terms of the information reported in the Pre-Survey. Our analysis of cumulative nonresponse over the two stages will compare sample statistics from the IPS to external benchmarks from the ACS and CPS. In this case, unlike the Pre-Survey analysis of nonresponse, we will have extensive socioeconomic and household financial information reported in the IPS with which to compare respondent households to the national benchmarks. We will therefore look to additional data sources, especially the Federal Reserve Board's Survey of Consumer Finances, to provide these benchmarks.

We will also construct sample weights that may be applied to sample data to allow for generalization to the population it intends to represent (see Section B.4 for further discussion). These weights will be constructed to account for nonresponse probabilities estimated based on the national benchmarks. Thus, the weighted data on respondents will match up to the national benchmarks from the ACS and/or CPS for those household attributes on which the weights are based.

In addition to reports of respondent demographics and household composition, the Pre-Survey includes a few questions concerning household financial knowledge and decision making. Given this project's central focus of this issue, the Initial Participant Survey Report will include a detailed assessment of how nonrespondents to the IPS answered these questions in the Pre-Survey. An assessment of cumulative nonresponse is more difficult, however, because we have no benchmark estimates with which to compare the sample statistics. Many of the questions in the IPS concerning financial capabilities have been asked in other national surveys—e.g., Lusardi and Mitchell (2006)—so we may compare response patterns to assess the potential impact of nonresponse on the composition of the sample.

As with any panel, attrition can greatly affect the representativeness of the sample over time, even if the attrition rate is less than 10%. In addition to calculating sample weights at each stage of the panel, we will routinely assess the patterns of nonresponse over time and report on our findings in Advice Interaction Survey Analysis reports and Annual Participant Survey reports. Each analysis will be structured in a similar manner to the analysis of nonresponse to the IPS, and the results of these analyses will be reported in comparable formats. We will use these findings to assess and improve our panel maintenance efforts over the course of the study.

As noted above, we believe that financial incentives are a crucial component of these efforts to obtain acceptable rates of participation in this panel study, both in terms of the initial recruitment of respondents and in terms of attrition. It has been observed that higher response rates need not generate a more representative sample and, in turn, reduce biases arising from nonresponse. Singer and Ye (2013) reach the following conclusion in their review of survey research:

“Maximizing the response rate is not always the best way to secure sample representativeness. Much better information about the mechanisms by which nonresponse

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

bias comes about, and the likely impact of incentives on those mechanisms, is needed if incentives are to be used to target nonresponse bias effectively" (Singer and Ye, 2013, p. 134).

However, higher responses rates necessarily reduce uncertainty about potential bias.

To clarify the distinction between actual bias and potential bias, consider the simple case of a population proportion, such as the proportion of U.S. households who received financial advice related to retirement during the preceding year. Let y denote the survey variable of interest, which takes the value "Yes" or "No." Let z be another binary variable indicating whether a sampled member of the population responds ($z=1$) or does not respond ($z=0$). We are interested in estimating $\Pr(y=\text{"Yes"})$ the population proportion who received financial advice, but the sample of survey respondents only provides a consistent estimate of $\Pr(y=\text{"Yes"}|z=1)$, the population proportion who received advice among those who would choose to respond to our survey if asked to do so. Nonresponse bias using this estimate is

$$\text{Bias} = \Pr(y=\text{"Yes"}|z=1) - \Pr(y=\text{"Yes"})$$

To see how bias relates to response rates, we may use the Law of Total Probability to write:

$$\Pr(y=\text{"Yes"}) = \Pr(y=\text{"Yes"}|z=1)\Pr(z=1) + \Pr(y=\text{"Yes"}|z=0)\Pr(z=0).$$

Thus:

$$\begin{aligned} \text{Bias} &= \Pr(y=\text{"Yes"}|z=1) - [\Pr(y=\text{"Yes"}|z=1)\Pr(z=1) + \Pr(y=\text{"Yes"}|z=0)\Pr(z=0)] \\ &= [\Pr(y=\text{"Yes"}|z=1) - \Pr(y=\text{"Yes"}|z=0)] \times \Pr(z=0). \end{aligned}$$

The sample of survey respondents provides consistent estimates of each of the right-hand-side probabilities but one, $\Pr(y=\text{"Yes"}|z=0)$, the population proportion who received advice among those who would choose not to respond to our survey if asked to do so.

Without supplemental information on the population of nonrespondents, we know nothing about $\Pr(y=\text{"Yes"}|z=0)$ other than that it is bounded between 0 and 1. This information is sufficient to generate sharp bounds on the population proportion of interest $\Pr(y=\text{"Yes"})$ and, in turn, nonresponse bias.

In particular, suppose that none of the nonrespondents received financial advice. Then $\Pr(y=\text{"Yes"}|z=0)=0$ and we have our lower bound on the population proportion who received advice:

$$\Pr(y=\text{"Yes"}) \geq \Pr(y=\text{"Yes"}|z=1)\Pr(z=1).$$

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

On the other hand, suppose that all of the nonrespondents received financial advice. Then $\Pr(y=\text{"Yes"}|z=0)=1$ and we have our upper bound:

$$\Pr(y=\text{"Yes"}) \leq \Pr(y=\text{"Yes"}|z=1)\Pr(z=1) + \Pr(z=0).$$

Each right-hand-side probability of the upper and lower bounds may be estimated using the available survey data. Thus, the survey responses may be used to generate a consistent interval estimate of the population proportion $\Pr(y=\text{"Yes"})$. Observe that the distance between the upper and lower bound of the interval is just the rate of nonresponse. Thus, the lower is the nonresponse rate, the tighter is the bound.

The above shows that any efforts made to successfully increase the response rate will necessarily reduce the width of the bound on $\Pr(y=\text{"Yes"})$. Furthermore, it can be shown that the new, narrower interval is fully contained within the prior, wider one.

This relationship carries over directly when we focus on nonresponse bias. That is, plugging in the upper bound on the population proportion, we get the following negative lower bound on bias:

$$\text{Bias} \geq [\Pr(y=\text{"Yes"}|z=1) - 1] \times \Pr(z=0).$$

The positive upper bound on the bias is obtained by plugging in the lower bound on the population proportion, as follows:

$$\text{Bias} \leq \Pr(y=\text{"Yes"}|z=1) \times \Pr(z=0).$$

We can characterize our uncertainty about potential nonresponse bias by the distance between the bounds on the bias, and, once again, the distance between the lower and upper bound is just the nonresponse rate. Thus, any efforts made to successfully increase the response rate will necessarily reduce the width of the bounds and, in turn, the uncertainty about potential bias.

Following a similar analytical approach 60 years ago, an American Statistical Association committee assessing the statistical methodology of the Kinsey report on male sexual behavior reached the follow conclusion regarding the benefits of decreased rates of nonresponse as opposed to increased sample size:

“Very much greater expenditure of time and money is warranted to obtain an interview from one refusal than to obtain an interview from a new subject” (Cochrane, Mosteller and Tukey, 1954, p. 282).

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

More recently, Manski (2003, 2007, 2014) has led the development of a growing literature on partial identification and interval estimation that we will incorporate to deal with nonresponse in this study, as described below in Sections B.4 and B.5.

The bounds presented above are identified without any information on nonrespondents. A number of studies have obtained supplemental information on nonrespondents with which to compare them to survey respondents. Singer and Ye (2013) review this literature and conclude that financial incentives may reduce or exacerbate nonresponse biases.

The meta-analysis of Groves and Peytcheva (2008) appears to be an important component of this literature. It should be noted, however, that the bulk of their analysis focuses on differences between respondents and nonrespondents—e.g., $\Pr[y=\text{"Yes"}|z=1]-\Pr[y=\text{"Yes"}|z=0]$ —rather than differences between respondents and the general population—e.g., $\Pr[y=\text{"Yes"}|z=1]-\Pr[y=\text{"Yes"}]$. Looking again at the components of nonresponse bias

$$\text{Bias} = [\Pr(y=\text{"Yes"}|z=1) - \Pr(y=\text{"Yes"}|z=0)] \times \Pr(z=0),$$

we see that the bigger is the difference between respondents and nonrespondents, the greater is the bias, *holding the nonresponse rate constant*. However, as the nonresponse rate falls, the impact of this differential is muted. Prior studies have offered mixed evidence on how the differential between respondents and nonrespondents varies with the nonresponse rate, which is not surprising given the range of the studies and the range of the outcomes measured across and within studies. For example, Groves and Peytcheva look at 959 measures arising from 59 different studies. What is not in dispute, however, is that any reduction in the nonresponse rate will reduce both (i) uncertainty about potential bias and (ii) the impact of any given differential between respondents and nonrespondents on the actual bias arising from nonresponse.

B.4. Tests of Procedures or Methods to be Undertaken

B.4.a Pretesting

The cognitive interviews will inform the content and item wording of the On the Road to Retirement surveys. Cognitive interviews will be conducted to test survey content and to assess context effects, specifically how the order and flow of survey topics influences participant comprehension and interpretation. For each interview, the cognitive interviewer will use an annotated version of the survey that specifies the objectives of each item to be tested. Interviewer scripts will include probes to be used for each item to be tested. See the discussion guide in Appendix 17. The probes will assess the following:

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time

ICR Reference Number: 201509-1225-001

April 2017

- Item comprehension or interpretation (“What does the term “xxx” mean to you?” or “Can you repeat the question I just asked in your own words?” or “How did you decide on your answer?”);
- Participant confidence in their response or judgment (“How sure are you about ...?”);
- Participant recall (“How do you remember that ...?”).

In addition, the protocol will document participant errors in survey navigation (e.g., errors in following skip instructions, marking multiple responses to a “mark one” item, etc.).

The cognitive interviews will be the first test of the survey instruments. We will then invite a sample of ALP members to take the survey to further refine it before it is fielded more broadly. We will conduct debriefing interviews with about one-third of pilot survey respondents using a similar method to the one described above for the cognitive interviews (see Appendix 16). A surveyor will go through the instrument with the respondent probing on issues such as comprehension and interpretation. We will report on proposed adjustments to the survey based on the cognitive interviews, the survey results, and the debriefing interviews.

Initial Participant Survey

We will begin by inviting 375 ALP respondents to complete the Internet IPS Baseline survey and another 90 ALP respondents to complete the mail-out IPS survey. The pretest instruments exclude a number of questions from the Internet IPS Baseline questionnaire eliciting household demographics, as described in Appendix 8. In particular, the questions excluded from the instruments to be pretested are as follows: DHC3, DHC4, DHC5, DHC6, DHC7, DHC9, DHC10, DHC13a, and DHC13c. The mail-out IPS survey to be pretested is included in Appendix 10.

After completing these surveys, 40 of the IPS respondents—20 from the Internet surveys and 20 from the mail-out surveys—will be selected to participate in debriefing interviews. Those who complete the Internet IPS Baseline survey will be asked one week later to complete the Internet IPS Follow-Up survey. About 20 respondents to the Internet IPS Follow-Up survey will participate in debriefing interviews.

Advice Interaction Survey

About one month after the Internet IPS Baseline surveys are administered, we will invite all respondents to complete the Internet AIS survey. We will also invite all respondents to the mail-out IPS to complete the mail-out AIS survey. We will conduct debriefing interviews with 20 respondents to the Internet AIS survey and 20 respondents to the mail-out AIS survey.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

B.4.b. Sample Weights

Sample weights will be generated to allow for the generalization of sample statistics to the population it intends to represent—i.e., households in the United States with at least one household member who is age 25 or older—under the assumption that unit nonresponse is random conditional on specified covariates. The benchmark distributions against which RAND ALP surveys are weighted are derived from the Current Population Survey Annual Social and Economic Supplement (administered in March of each year). This choice follows common practice in other social science surveys, such as the Health and Retirement Study. We anticipate following a similar approach to the one described below for the ALP. The calculations will be performed using the STATA software package.

Three weighting methods have been implemented for the ALP: cell-based post stratification, logistic regression, and raking. After experimentation over time, raking has been found to give the best results among these different methods. It allows finer categorizations of variables of interest (in particular, age and income) than cell-based post-stratification does, while still matching benchmark distributions of such variables exactly.

The ALP weighting procedure consists of two steps. In the first one, individual demographics from the CPS are mapped onto those available in the ALP and selected weighting variables are recoded into strata (or categories). Such re-categorization, which applies to both CPS and ALP variables, is required particularly when weighting variables are continuous (e.g., income) or take values in a finite, but relatively large set (e.g., age). In the second step, the raking algorithm is implemented and sample weights are generated by matching the proportions of pre-defined strata in the ALP to those in the CPS. More precisely, the weighting algorithm is performed on the following set of two-way marginals:

- **Gender × Age**
with twelve categories: (1) male, 18-30; (2) male, 31-40; (3) male, 41-50; (4) male, 51-60; (5) male, 61-74; (6) male, 75+; (7) female, 18-30; (8) female, 31-40; (9) female, 41-50; (10) female, 51-60; (11) female, 61-74; (12) female, 75+.
- **Gender × Ethnicity**
with six categories: (1) male, non-Hispanic White; (2) male, non-Hispanic African American; (3) male, Hispanic or Other; (4) female, non-Hispanic White; (5) female, non-Hispanic African American; (6) female, Hispanic or Other.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

- **Gender × Education**

with six categories: (1) male, high school or less; (2) male, some college or a bachelor's degree; (3) male, more than a bachelor's degree; (4) female, high school or less; (5) female, some college or a bachelor's degree; (6) female, more than a bachelor's degree.

- **Gender × Household Income**

with eight categories: (1) male, <\$35,000; (2) male, \$35,000-\$59,999; (3) male, \$60,000-\$99,999; (4) male, \$100,000+; (5) female, <\$35,000; (6) female, \$35,000-\$59,999; (7) female, \$60,000-\$99,999; (8) female, \$100,000+.

- **Household Income × Number of Household Members**

with six categories: (1) single, <\$60,000; (2) single, \$60,000+; (3) couple, <\$60,000; (4) couple, \$60,000+; (5) 3+ members, <\$60,000; (6) 3+ members, \$60,000+.

The above strata are defined such that none of them contains less than 5% of the ALP sample. This rule of thumb is commonly adopted (DeBell and Krosnick, 2009) in post-stratification weighting. It aims at preventing very small cell sizes and, therefore, extremely high weights.

We will take a similar approach to the ALP for constructing sample weights under the assumption of conditionally random nonresponse, but we must also account for the age-based variation in sampling probabilities described in Section B.1. In fact, we will construct two sets of weights: one that accounts only for the known probability of sampling from among the Pre-Survey respondents and another that is intended to reflect both this stratification by age and the unit nonresponse at each stage of the panel beginning with the Pre-Survey. Both approaches can be interpreted as inverse probability weighting, as described by Wooldridge (2002). Statistical software packages typically accommodate such weights for calculation of means, variances, linear regression coefficients, and other parameters of interest, and, in turn, for the calculation of confidence intervals or “margins of error.” For instance, the STATA “pweights, or sampling weights, are weights that denote the inverse of the probability that the observation is included because of the sampling design,” as described in the STATA 12.1 electronic help manual.

In his text, Wooldridge defines a broad class of estimators that incorporate these weights—the weighted-M estimator—and presents the analytical solution for the variance-covariance matrix “which looks like the standard formula for a robust variance matrix estimator except for the presence of the sampling probabilities” (Wooldridge, 2002, p. 594). In fact, in the context of the linear regression model estimated by (inverse-probability) weighted least squares, the estimators coincide. Relatedly, according to the STATA 12.1 electronic help manual, “If the command allows pweights and you specify them, vce(robust) is implied.”

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

The calculation of variances, standard errors, and confidence intervals are straightforward when one uses (inverse-probability) weighted sample statistics as estimators of their population analogs. To illustrate, we will focus on sample weights based on age group. Let $h=1,\dots,5$ denote the five age strata, and let w_{hi} denote the sample weight for the i th out of the n_h households in stratum h . In the case of a simple random sample, the weights would be equal across all households. Here, with stratified sampling based on age group and sampling weights determined solely by age group, the weights vary across strata but are all equal within strata. That is, $w_{hi}=w_h$ for all i and h . The five values of w_h would be estimated based on the population proportions found for each age group in U.S. Census data. Note that this approach can be applied to estimate population parameters under the assumption of simple random sampling within strata with nonresponse that is random conditional on age group. Should nonresponse instead be modeled as random conditional on additional covariates, such as in the case of the ALP sample weights, then the weights will vary across households within each stratum.

Now consider estimation of the population total for the variable Y .⁷ Let y_{hi} denote the value of Y for the i th household in stratum h , $i=1,\dots,n_h$. The estimator for the population total of Y is

$$\hat{Y} = \sum_{h=1}^5 \sum_{i=1}^{n_h} w_{hi} y_{hi}$$

The estimator for the variance of $\hat{Y}$ is

$$\hat{V}(\hat{Y}) = \sum_{h=1}^5 (1-f_h) \frac{n_h}{n_h-1} \sum_{i=1}^{n_h} (y_{hi} - \bar{y}_h)^2$$

where $\bar{y}_h$ is the weighted sample mean for stratum h and f_h is the stratum- h sampling rate. In our case, f_h is close to 0 and this “finite population correction” $(1-f_h)$ may be ignored.

Analogous formulas apply to other estimators, such as sample means and regression coefficients. As noted above, see Wooldridge (2002, p.594) for a representation of the variance-covariance matrix for weighted least squares regression coefficients. To construct confidence intervals, one proceeds in the usual manner. For instance, after computing the weighted sample mean of the values y_{hi} , denoted $\hat{\mu}$, then an approximate 95%-confidence interval for the population mean of Y will be given by:

$$\hat{\mu} \pm 1.96 \cdot \sqrt{\hat{V}(\hat{\mu})}$$

where $\sqrt{\hat{V}(\hat{\mu})}$ is the estimated standard error of $\hat{\mu}$.

⁷ This discussion is adapted from the section of STATA 12.1 electronic help manual on variance estimation for survey data with a stratified single-stage design (pages 179-180 of svy.pdf).

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

B.4.c. Imputations and Interval Estimates

The sample weights described above will be calculated under the assumption that unit nonresponse is random conditional on specified covariates. Similarly, imputations may be made under the assumption that item nonresponse is conditionally random. Sample weights and imputations may then be used to calculate point estimates of population parameters of interest and to construct confidence intervals around these point estimates. However, these assumptions on unit and item nonresponse may lack credibility, as will the point estimates and confidence intervals that rely on these assumptions.

Interval estimates that place no assumptions on the values of missing data have maximal credibility. Yet these interval estimates may be excessively conservative if something is known about the nature of nonresponse. As described above in the discussion of the Initial Participant Survey Report in Section B.2 and, more thoroughly, in Manski (2007, 2013), we will assess the impact and discuss the credibility of assumptions that may be made about the values of missing data arising from unit and item nonresponse. This analysis will explore a broad range of assumptions on the data generating process. In so doing, we will produce imputed values for missing data under the assumption that item nonresponse is random conditional on specified covariates. Where weaker assumptions are maintained and interval estimates are obtained, confidence intervals may be calculated by a bootstrap method (e.g., Horowitz and Manski, 2000) or, where applicable, by utilizing more recent analytical results (e.g., Imbens and Manski, 2004).

B.5. Analysis Plan

This section describes the plan for analysis of information collected from the On the Road to Retirement panel. Statistical calculations will be performed using the STATA software package.

B.5.a. Pretesting

Findings from the pretests will be thoroughly documented in the Report on Pretest Results. We will use standard empirical methods to evaluate qualitative data produced in the cognitive interviews and respondent debriefings. Pilot survey responses will be analyzed to identify problematic questionnaire items, as indicated by, for example, high rates of item nonresponse or response of “don’t know,” internally inconsistent responses, and responses that appear to be inconsistent with information provided in previous ALP interviews.

Information from the respondent debriefings will be used in conjunction with the data on response patterns to determine whether changes should be made to survey questionnaire content

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

and/or layout. In particular, findings from the pretests will be used to make minor changes to wording of questions and could result in removal of questions if they are found to be confusing or more burdensome than anticipated. The Department of Labor would seek to update the instruments by requesting that a nonmaterial change be approved by OMB.

B.5.b. Pre-Survey

Analysis of the Pre-Survey data will be included in the Initial Participant Survey Report, which will provide detailed information on sample recruitment and response rates to the Pre-Survey. This component of the report will focus on comparisons of the sample of respondents relative to the population from which it was drawn, as described by publicly available data from the U.S. Census Bureau on household composition and home ownership and on individual respondent demographics (e.g., gender, age, and race/ethnicity) and employment status. The report will also describe in detail the procedures for constructing sample weights for the Pre-Survey data and will compare the outcomes obtained utilizing alternative methods for doing so.

The Pre-Survey data will then be analyzed in conjunction with the Initial Participant Survey data to assess the patterns of nonresponse at this subsequent (IPS) stage of sampling with respect to reports on household financial decision making and internet access, as well as the household and respondent attributes listed above. We will attempt in this analysis to identify and address concerns about the impact of patterns of nonresponse on the key substantive issues that this study intends to address, as detailed in Section A.2. In particular, we will assess the impact and discuss the credibility of assumptions that may be made about the values of missing data arising from unit and item nonresponse. In the absence of assumptions, one can obtain computable bounds on the population parameters of interest—e.g., population means, medians, and proportions. We will also explore the middle ground between interval estimation making no assumptions and traditional point estimation using weights and imputations to implement assumptions that nonresponse is random conditional on specified observed covariates. For further discussion of these issues and the reporting of official statistics, see Manski (2014).⁸ See also Kline and Santos (2013) for a potentially useful approach to determining the level of nonignorable selection necessary to undermine conclusions regarding the population parameters of interest that were obtained under the assumption that nonresponse is conditionally random.

B.5.c. Initial Participant Survey

The Initial Participant Survey Report will provide detailed information on sample recruitment,

⁸ For a textbook exposition, see chapter 2 of Manski (2007). See also the original research in Horowitz and Manski (1998, 2000).

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

response rates to the Initial Participant Survey, and description of sample selection; the composition of the sample and its representativeness relative to national benchmarks with and without sampling weights; comparisons of the household attributes and response patterns across interview modes (internet, phone, or mail); indicators of data quality; and baseline information regarding behavior, attitudes, and expectations to be further explored using information to be collected via Advice Interaction Surveys and Annual Participant Surveys.

Details on the sample composition will include, at a minimum, summary statistics on household demographics, household composition, employment, and financial characteristics. The key behavioral measures to be analyzed will include retirement savings and wealth outside of retirement plans; retirement planning and retirement strategies employed (if any); reliance upon advice (both professional and informal); expectations of retirement behavior; and indicators of cognitive capabilities, such as financial literacy and numeracy, that have been found to be of particular importance for household's ability to plan ahead and make wise financial decisions.

With our analysis of the Initial Participant Study data, we will be able to make some progress on the research questions listed in Section A.2 above, including:

- a) How do households plan for retirement? What roles do retirement savings vehicles—especially, DC plans and IRAs—play in those plans?
- b) How are savings and investment decisions inside and outside of retirement plans influenced both by the types of dedicated retirement savings plans that are available to the household and by the investment options that are available within those plans?
- c) How should we measure such phenomena as financial capabilities, perceptions of retirement plan options, and retirement savings strategies?

B.5.d. Advice Interaction Survey—Year 1

Findings from Year 1 of the Advice Interaction Survey will be carefully and fully documented in the First Advice Interaction Analysis Report. The report will be structured in a very similar fashion to the Initial Participant Survey Report to allow for ease of comparability and continuity in project documentation. Throughout the analysis, we will be sure to assess the impact of respondent selection issues arising from two types of decisions: the decision to respond to each component of the survey and the decision to obtain financial advice.

Our methodology to account for self-selection will follow the approach taken in the analysis of the Pre-Survey and the IPS data. For example, with respect to survey attrition, the report will

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

describe in detail the procedures for constructing sample weights and will compare the outcomes obtained utilizing alternative methods for doing so. We will also assess the impact and discuss the credibility of assumptions that may be made about the values of missing data arising from attrition and from incomplete submission of documents.

The decision to obtain financial advice will be a central focus of our analysis. We will use the information collected in the AIS, as well as the Pre-Survey and IPS interviews, to study who chooses to obtain professional advice. In order to properly interpret findings regarding the type of advice that is given and how it is utilized, we will rigorously account for the household's decision to obtain this advice using standard econometric methods and will assess and discuss the credibility of assumptions that must be made in order to produce these findings.

With our analysis of the AIS1 data, we will be able to make some progress on the research questions listed in Section A.2 above, including:

- a) How do households plan for retirement and how do they act on those plans? What kind of advice do they get to develop and act on those plans? What roles do retirement savings vehicles—especially, DC plans and IRAs—play in those plans?
- b) What financial, demographic, and retirement plan characteristics are associated with the use of a professional financial adviser? How does retirement planning advice vary with these characteristics?
- c) What types of informal advice related to retirement—i.e., something other than advice from a professional financial services provider—do households rely on and to what extent? How do professional advice and informal advice interact with one another?
- d) What types of advice do DC plan participants and IRA holders receive in conjunction with their retirement plans? Does this advice enhance their financial capabilities?
- e) How are decisions made during the transition to retirement or when changing jobs?

B.5.e. Annual Participant Survey

Findings from the Annual Participant Survey will be carefully and fully documented in the Annual Participant Survey Analysis report. The report will be structured in a very similar fashion to the Initial Participant Survey Report to allow for ease of comparability and continuity in project documentation. With data obtained over a one-year period, we will begin exploiting the longitudinal nature of the study to address many of the questions of interest. In addition to the key substantive questions, this report will pay special attention to methodological questions

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

regarding sample retention and other survey design issues that must be addressed to ensure the long-term success of this study.

The methodological approach to be employed will be tailored to the question to be investigated and will exploit the availability of repeated observations using the most appropriate econometric methods available. For example, fixed-effect estimation can be used to control for respondent specific time-invariant unobserved factors that may influence the outcome under study. Alternatively, a simple difference-in-difference framework may be adopted to compare changes in identified groups (e.g., investors who visited a financial adviser in the past year and those who did not). Propensity score matching methods may be used to improve comparability across groups if appropriate. In each case, we will be sure to assess and discuss the credibility of assumptions that must be made in order to produce these findings. In addition to more sophisticated analyses, we will provide simple descriptive statistics indicating how key variables of interest (e.g., fraction of investors utilizing each type of retirement plan) evolve over time, while accounting for sample selection issues.

With our analysis of the APS data, we will begin to make progress on research questions listed in Section A.2 that require longitudinal data, including:

- a) How frequently do households change retirement planning strategies? What factors, such as market conditions or age of participant, predict a change in retirement planning strategy?
- b) How do retirement planning strategies and decisions evolve over time?
- c) Are cognitive biases consistent over time for an individual or are they dependent on particular circumstances?

B.5.f. Advice Interaction Survey—Year 2

Findings from Year 2 of the Advice Interaction Survey will be carefully and fully documented in the Second Advice Interaction Analysis Report. The format of this report should be very similar to that of the First Advice Interaction Report with respect to cross-sectional findings from the AIS2 data. However, by combining the two years of data, we will begin to obtain a much fuller picture of who obtains financial advice, why they obtain this advice, and how beliefs and decisions evolve over time. As with the APS data, we will exploit the availability of repeated observations using the most appropriate econometric methods available, and we will be sure to assess and discuss the credibility of assumptions that must be made in order to produce these findings.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

B.6. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

DOL has contracted with the Resolution Economics Group, a small business that provides economic consulting services, to conduct this study. The Resolution Economics Group Principal Investigator is Dr. Jeff Dominitz. Other key members of the research team include Dr. Elaine Reardon from Resolution Economics Group, Dr. Angela Hung from the RAND Corporation, Dr. Arie Kapteyn from the University of Southern California (USC), and Dr. Charles F. Manski from Northwestern University.

Individuals Consulted on Statistical Aspects:

Name	Agency/Company/Organization	Telephone Number
Jeff Dominitz	Resolution Economics	310-275-9137
Angela Hung	RAND Corporation	310-393-0411 x6081
Arie Kapteyn	USC	310-448-0371
Charles Manski	Northwestern University	847-491-8223

Individuals Collecting and/or Analyzing Data:

Name	Agency/Company/Organization	Telephone Number
Jeff Dominitz	Resolution Economics	310-275-9137
Elaine Reardon	Resolution Economics	310-275-9137
Angela Hung	RAND Corporation	310-393-0411 x6081
Noreen Clancy	RAND Corporation	703-413-1100 x5272
Melissa Bradley	RAND Corporation	703-413-1100
Emily Payne	RAND Corporation	310-393-0411
Diana Malouf	RAND Corporation	310-393-0411
Arie Kapteyn	USC	310-448-0371
Tania Gutsche	USC	310-448-0371
Charles Manski	Northwestern University	847-491-8223

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

References

- Bricker, J., L. Dettling, A. Henriques, J. Hsu, K. Moore, J. Sabelhaus, J. Thompson, and R. Windle (2014), "Changes in U.S. Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, 100(4): 1-40.
- Church, A. (1993), "Estimating the Effect of Incentives on Mail Survey Response Rates: A Meta-Analysis," *Public Opinion Quarterly*, 57, 62-79.
- Cochrane, W., F. Mosteller and J. Tukey (1954), *Statistical Problems of the Kinsey Report on Sexual Behavior in the Human Male*, Washington, D.C.: The American Statistical Association.
- DeBell, M. and J. Krosnick (2009), "Computing Weights for American National Election Study Survey Data," ANES Technical Report Series, No. nes012427.
- Edwards, P., I. Roberts, M. Clarke, C. DiGiuseppi, S. Pratap, R. Wentz, and I. Kwan (2002), "Increasing response rates to postal questionnaires: systematic review," *British Medical Journal*, 324: 1183-91.
- Göritz, A.S. (2006), "Incentives in Web Studies: Methodological Issues and a Review," *International Journal of Internet Science*, 1, pp. 58-70.
- Groves, R. and E. Peytcheva (2008), "The Impact of Nonresponse Rates on Nonresponse Bias: A Meta-Analysis," *Public Opinion Quarterly*, 72, 167-189.
- Horowitz, J. and C. Manski (1998), "Censoring of Outcomes and Regressors due to Survey Nonresponse: Identification and Estimation Using Weights and Imputations," *Journal of Econometrics*, 84, 37-58.
- Horowitz, J. and C. Manski (2000), "Nonparametric Analysis of Randomized Experiments with Missing Covariate and Outcome Data," *Journal of the American Statistical Association*, 95, 77-84.
- Hung, A., N. Clancy, J. Dominitz, E. Talley, C. Berrebi, F. Suvankulov (2008), *Investor and Industry Perspectives on Investment Advisers and Broker-Dealers*. Santa Monica, CA: RAND, TR-556-USSEC, available at: http://www.sec.gov/news/press/2008/2008-1_randiabdreport.pdf.
- Imbens, G. and C. Manski (2004), "Confidence Intervals for Partially Identified Parameters," *Econometrica*, 72, 1845-1857.
- Kline, P. and A. Santos (2013), "Sensitivity to Missing Data Assumptions: Theory and Evaluation of the U.S. Wage Structure," *Quantitative Economics*, 4, 231-267.
- Laurie, H. and P. Lynn (2008), "The Use of Respondent Incentives on Longitudinal Surveys," Working Paper 2008-42, Institute of Social and Economic Research, University of Essex.
- Lusardi, A. and O. Mitchell (2006), *Financial Literacy and Planning: Implications for Retirement Well Being*, Pension Research Council Working Paper n.1, Wharton School, University of Pennsylvania.

On the Road to Retirement Surveys: Investigating Retirement Planning Decision-Making and the Evolution of Individuals' Retirement Planning Decisions over Time
ICR Reference Number: 201509-1225-001
April 2017

- Mack, S., V. Huggins, D. Keathley, and M. Sunduckchi (1998), "Do Monetary Incentives Improve Response Rates in the Survey of Income and Program Participation?" *Proceedings of the Section of Survey Research Methods, American Statistical Association*.
- Manski, C. (2014), "Credible Interval Estimates for Official Statistics with Survey Nonresponse," Department of Economics and Institute for Policy Research, Northwestern University, working paper, available at http://faculty.wcas.northwestern.edu/~cfm754/credible_official_statistics.pdf
- Manski, C. (2007), *Identification for Prediction and Decision*, Cambridge: Harvard University Press.
- Manski, C. (2003), *Partial Identification of Probability Distributions*, New York: Springer-Verlag.
- Millar, M. and D. Dillman (2011), "Improving Response to Web and Mixed-Mode Surveys," *Public Opinion Quarterly*, 75 (2), pp. 249-269.
- Singer, E. and C. Ye (2013), "The Use and Effects of Incentives in Surveys," *The ANNALS of the American Academy of Political and Social Science*, 645: 112-141.
- Wooldridge, J. (2002), *Econometric Analysis of Cross Section and Panel Data*, Cambridge: MIT Press.