

THE JOY OF GIVING OR ASSISTED LIVING: TECHNICAL APPENDIX FOR SUPPLEMENTS AND DATA SECTION OF www.afajof.org

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This appendix provides additional information on the survey that we used in the paper. In the first section, we explain our decision in favor of using an internet survey and discuss some methodological issues surrounding internet surveys. In the second section, we explain the choice of Greenfield Online as provider of this service, detail our interaction with them, and give an example on how real decision making at Vanguard has been based on our work. In the third section, we discuss sample selection and quality control procedures with respect to the final survey. The selection criteria detailed in this section allow us to overcome the usual sample selection issues with Internet surveys we mention in the first section. In the fourth section, we elaborate on the representativeness of our sample in terms of wealth, demographics, consumption, and long-term care policy take-up. In the last section, we present additional results on the plausibility of our strategic survey questions. We attach a full copy of the final survey at the end of this appendix.

A Why Online?

The paper illustrates that survey research is essential for our purpose of parameter identification. We spent some time considering our options in terms of survey mode. One possibility would have been to place the strategic survey questions on a standard survey, such as the Health and Retirement Survey, henceforth HRS, or the Consumer Expenditure Survey, henceforth CEX. In practical terms, this would have required a supplemental survey rather than being placed directly onto the body of the main survey. The second would have been to design a custom survey of Vanguard customers. The final possibility, and the one selected, involved use of a well respected supplier of Internet Survey services.

Inserting questions into large-scale, well-known surveys is a strategy that has proven successful for researchers such as Johnson, Parker, and Souleles [2006] (using the CEX) and Barsky, Juster, Kimball, and Shapiro [2007] (using the HRS). On the one hand, this approach has advantages in that the data set is well known in terms of its sampling properties (demographic and socioeconomic make-up) and data quality. On the other hand, the drawback of going the large-scale survey route is that one has a very tight space constraint due to the high cost of conducting such surveys. The nature of our research question, separating bequest and precautionary motives, required a highly specific and rich economic and demographic context. We needed to collect information on consumption, income, and wealth, health states, health costs, as well as attitudes towards Medicaid and towards planning for a bequest. This need was the primary motivation for choosing the internet survey route.

A secondary motivation to custom design was methodological; to further our understanding of how best to design surveys over the Internet. There is increasing evidence that such surveys have potentially great value to add. As Schonlau, Van Soest, Kapteyn and Couper [2006] write: *Internet interviewing and experimentation open up unique new possibilities for empirical research in the social sciences. It creates opportunities to measure new or complex concepts (e.g., preferences, attitudes, expectations and subjective probabilities) that are hard to measure with other interview modes and to design better measurement methods for existing “standard” concepts (e.g., income, wealth). Moreover, all this can be achieved in much shorter time frames than is customary in more traditional survey research. Usually, empirical researchers in the social sciences have to use data collected by others or, if they want to collect data themselves, face time lags of often several years between a first draft of a questionnaire and the actual delivery of the data. Internet interviewing can reduce this time lag. This alone changes the opportunities for empirical research in the social sciences dramatically.*

Despite the promise, one well-documented drawback of internet surveys is sample selection bias. Schonlau et al. [2006] conduct an internet-based survey on a sub-sample of existing respondents of the 2002 wave of the HRS who are 55 years of age or older. Participation in the web-based survey requires an internet connection and was voluntary. They end up with 10% of the HRS sample, and study the differences in demographic and socioeconomic make-up. Not surprisingly, they find that the odds ratio of participating in the web survey decline with age, increase with educational attainment, increase with income and stock market participation, decrease with health status, are higher for Whites than other races. Given that internet use is not particularly prevalent in elderly populations, the selection issue is bigger for any retirement study.

Being aware of this selection issue, we took great care in specifying pre-selection criteria that would effectively undo the selection bias. We detail these criteria below. A pilot survey was instrumental to getting this right. In addition, we knew that Vanguard itself had a specific trusted

internet survey company, Greenfield Online, that it had used with success in past work on retirees. This prior experience as well as the pilot survey convinced us that Greenfield Online was able to collect a large enough sample of data from retirees across the economic and demographic spectrum.

B Greenfield Online and Our Interaction with Them

B.1 Greenfield Online information and general procedures

Founded in 1994, Greenfield Online is a global interactive media and services company and the leading online survey company. It is active in 10 offices in 8 countries and has 780 employees. They have sampled more than 60 million consumer opinions since 1999 and every major marketing company in the world is a customer of Greenfield Online. Their management team includes the founder of the Internet Survey Solutions industry.

The Greenfield Online panel is managed in a very active and detailed manner. They have approximately 600,000 active panelists in the U.S., which is the number who have started a survey within the past six months or joined the panel and activated their account in that time period. A series of checks of identity ensure that no one is signing up for multiple accounts. They standardize addresses, and all addresses are matched against the United States Postal Service database in order to verify address information. Any fraudulent or incorrect address records result in a rejection of the panelist registration. Further, addresses are used as incentive fulfillment and as a supplemental check. They experience an average of 2% attrition per month. They offset this by a recruitment strategy aimed at maintaining broad economic and demographic representation.

They have several checkpoints in place to monitor quality of survey responses. The demographics are validated against the information they store in their panel database. They also have the ability to track individual behavior in answering the survey by tracking click patterns, as well as answer times on specific questions and for the whole questionnaire.

B.2 How Greenfield contacts and rewards respondents

Greenfield notifies, via email, a pre-screened random sample of its online panel of members whenever a survey is ready for their response. Each invitation and participation (be it successful survey participation or termination or quota-full) is registered in their database. Panelists complete no more than four invited surveys a month, with an average panelist completing one or two surveys per month. For invitations, their rule is to allow up to one invitation per day. Panelist may also elect to take surveys that they qualify for (by meeting pre-screening characteristics) by visiting and logging onto the Greenfield web site.

Incentives are offered to panel members in the form of credits called “dollars,” or “incentives,”

which are credited to an account maintained by Greenfield Online. Panel participants may redeem their “dollars” for cash by notifying Greenfield of their desire to do so via an online account payment request form. Upon receipt and verification of the form, Greenfield Online forwards the account balance available for withdrawal to the panel member within six weeks from the receipt of the request. Details surrounding the compensation rules are disclosed on Greenfield’s web site; see <http://www.greenfieldonline.com/TrafficUI/mscui/page.aspx?pgtid=17>. Greenfield does not disclose its exact schedule of incentives for its surveys in order to maintain some (understandable) degree of confidentiality around its revenue model. However, they have confirmed that individual incentives may be added for particular surveys and are always used to reach low-incidence populations. In addition to any individual incentives that are offered to panelists for participating in a particular survey, those panelists who complete the surveys are entered into a sweepstakes drawing that Greenfield conducts twice a month. While individual incentives for specific surveys can be as little as \$1, prizes in the sweepstakes range from \$100 to \$2,500. See http://www.greenfieldonline.com/community/meet_winners.html.

B.3 Greenfield Online and Vanguard business decisions

Vanguard provided the financing for our two surveys (the pilot in 2005, and the final version in 2006). Greenfield Online was chosen for this project in a competitive process from a number of potential providers of online survey research. Greenfield was selected on the basis of a competitive bid, their good reputation in the industry, and Vanguard’s favorable past experience on other projects, particularly around their responsiveness to requests to refine and perfect the survey instrument. In addition to the surveys used in this research, Vanguard has used Greenfield’s online panel for several other major research projects, including two earlier surveys on the perception of risks in retirement, as well as a current project in the field with Greenfield in 2008, in which panel members are being asked to supply information regarding practical aspects of the process they use when liquidating assets in retirement.

Vanguard has relied on the information obtained in these surveys to inform its strategic planning and product development in the retiree market, and for use in creating educational and informational materials for its shareholder publications and for use on its web site. The Greenfield Online survey evidence and analysis described in this paper was specifically relevant to Vanguard in the development of its new “Managed Payout Funds” which were launched in April 2008. The Greenfield Online data and analysis conducted by the present authors was viewed as compelling evidence to Vanguard’s product design team of the significant demand that would likely exist for a retirement payout product positioned to provide retired investors regular payments, but emphasizing complete liquidity as well as the potential for growth of invested capital, to meet either precautionary or bequest motives. With little or no marketing beyond a basic description of these

features of the product on Vanguard’s web site, this family of new funds has received deposits of close to \$200 million in less than three weeks of operation.

C Quality Control

C.1 Design of questions

Given that we were custom designing the survey, we spent considerable effort designing the questions on standard economic and demographic characteristics. Not only did we draw on prior experience (Ameriks, Caplin, and Leahy [2003,2007] and Ameriks, Caplin, Leahy, and Tyler [2007] conducted three surveys at TIAA-CREF), we also interacted closely with friendly experts at the HRS in coming up with our questions for this particular survey. (Caplin is now on the Steering Committee of the HRS.) This was important in the design of questions to measure quantitative variables, such as the values of various forms of financial assets. Following a procedure that is time tested at the HRS, these questions were designed first to get respondents to provide a broad numerical categorization, and then within that categorization to ask for greater specificity. This procedure is regarded as industry best practice, and also provided us with a double check. Any precise answer that lay outside the prior stated range resulted in a prompt for the two questions to be answered again to remove inconsistencies.

In addition to serving as a model for the design of our quantitative questions, the design of our strategic survey questions was also informed by HRS precedents. The HRS has a long history of posing questions relating to the likelihood of various future shocks (e.g. death). More recently, the HRS has added a series of questions concerning hypothetical choices designed to provide insight into preference parameters such as the level of relative risk aversion. Our strategic survey questions are in this tradition of posing hypothetical questions, and were worded in a manner that bears a strong relationship to those that have already been posed on the HRS. Not only did we take care in designing the questions, but we also paid close attention to the advice of psychologists engaged in survey design, by making the questions flow into one another in a manner that was as close to conversational as possible. This again is a design element borrowed from the HRS.

C.2 How a pilot survey informed the final survey

We went to great pains to confirm the robustness of our survey. Not only did we begin drafting the survey back in July 2004, but also we completed a full scale pilot survey in November 2004 that was launched by Greenfield Online in February 2005. We used this pilot survey to refine our questions and our sample selection criteria between October 2005 and July 2006. The final survey was launched in September 2006. During this entire period of interaction, we iterated many times

on the survey questions and their relationship to the model with the purpose of delivering a quality product.

The main reason for conducting a pilot survey was to familiarize ourselves with the unique challenges of designing an Internet Survey, and the particulars of the Greenfield Panel. We had previous familiarity in our research with mail surveys, and were aware not only of the additional challenges, but also of the additional possibilities opened up by the Internet format. We also needed to understand the economic and demographic make-up of the sample, so that we could understand how response rates differed by gender, age, income, etc. In addition, we wanted to test out our strategic survey questions. Finally, we wanted an opportunity to refocus the survey if needed. This did indeed turn out to be necessary. The pilot survey contained many questions relating to the use of the housing asset, but we decided in the end that we would need the full survey just to adequately dig into bequest and precautionary motives, while using traditional approaches to housing wealth. In the end, we believe that the pilot survey was an important step with regard to quality control.

One of the main lessons we learned from the pilot survey concerned the particular filters that we needed to add to ensure that the information from the survey was relevant to the larger population as represented by the HRS. In the pilot survey, all we screened for was that respondents were 55 years of age or older; expected \$20,000 or less in earnings from work in the current year and in all future years; had no dependents other than (possibly) a partner living with them; and reported being the primary (or co-primary) financial decision maker in their household. The survey generated significant differences in response times on the basis of marital status and home ownership status. For example, average response time for owners was 24.4 minutes and 17.8 minutes for renters. As a result, the respondents were skewed to renters who have lower assets of all forms than do homeowners. Following the findings in the pilot survey, we changed our selection criteria dramatically for the final survey to ensure that a broader distribution of households responded; see below.

Several of the key findings of the final survey emerged strongly in the pilot survey as well. First, we found a close correspondence between consumption expenditures and income as well as between expected future consumption expenditures and income, implying a lack of actual and expected asset rundown in retirement. Second, we asked respondents about their anticipated need of long-term care and the expected annual cost in today's dollars. We found an average of 25 months and a cost of \$48.3K. These numbers underline the importance of long-term care considerations in retirement phase. Third, we asked versions of the strategic survey questions. We also found strong distaste for Medicaid care in the pilot: respondents were willing to reduce their estates by \$143K on average in order to receive care at the private facility rather than a Medicaid facility. The interpretation of (a slightly different version) of the lock-box question was potentially

compromised by a programming mistake. Still, the answers showed much heterogeneity in the fraction of the lock-box amount respondents commit to long-term care versus bequests. In short, the pilot survey results are consistent with the results from our final survey.

C.3 Sample selection criteria for the final survey

We specified demographic and socioeconomic selection criteria that would effectively undo likely forms of bias (a “*” indicating a binding constraint). In particular, we allowed no more than 40% of our sample in each of the 1947-51, 1941-46, 1936-40, and 1930-35 cohorts. We allowed no more than 35% to be couples whose children left the home or to be couples with no children in order to end up with sufficient singles. We allowed no more than 40% of respondents to have retirement wealth below \$25K (*) and no more than 90% to have such wealth below \$75K. Finally, we allowed no more than 40% of respondents to have financial non-retirement wealth below \$25K (*) and no more than 90% to have such wealth below \$100K (*). Our internet survey contained a first page with questions that allowed us to verify these criteria. If the quota for a certain group was reached, the survey was terminated after the first screen for any subsequent respondent that fell into that same group. We obtained 1085 responses that passed the sample selection stage.

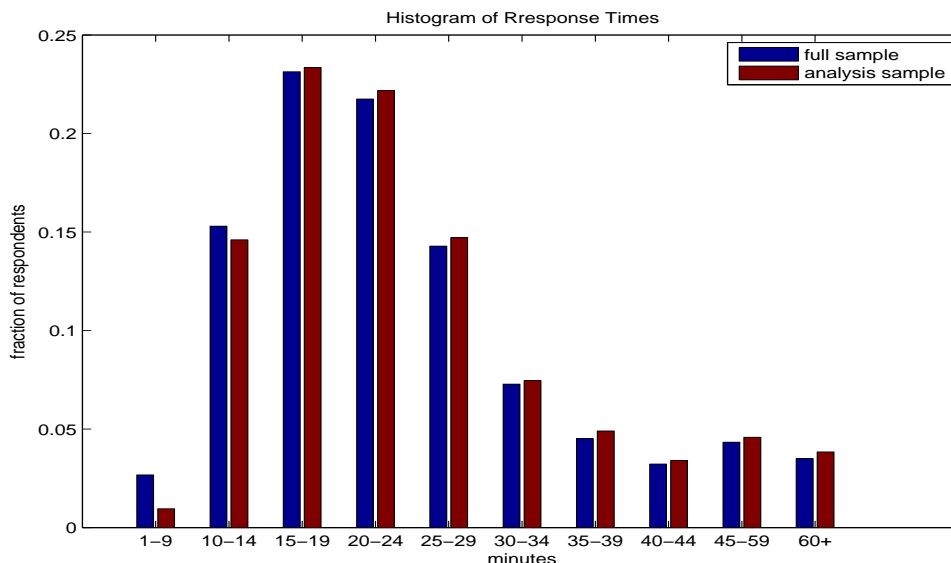
C.4 Time spent taking the final survey

According to timer information from the survey, the median respondent in the final survey took 22 minutes. Figure 1 shows the entire histogram of response times for the final survey. For comparison, the mean amount of time spent that respondents spent on the pilot survey was also 22 minutes.

C.5 Final sample selection

As a first screen, we took out respondents who took less than 9 minutes to complete the survey. In order to further safeguard the quality of our data, we carefully studied all responses, checking for inconsistencies, mistakes, and implausible answers. We screened out 147 for first order response errors: 23 reported having no financial wealth whatever and total income of less than \$200 a month; 13 reported total spending of \$1; 13 reported spending more than the sum of assets and thirty years worth of income; 38 reported living expenses less than \$500 per year; 6 reported spending the same amount on all six spending categories; 32 reported owning a home value worse than \$10K; 9 had mortgage debt more than twice the home value (this was prior to the housing crisis); 57 did not own homes but reported spending nothing on rent; and 5 switched to diametrically opposite allocations between the \$100K long-term care (LTC) box and the \$250K LTC box questions. This first screen left us with a sample of 938 complete responses, 498 of which are singles.

Figure 1: Histogram of Final Survey Response Times



C.6 Consistency between data and model

By having the freedom to ask our respondents whatever we like, we were able to insert a few questions that could provide support for some key modeling assumptions. For example, a key premise of the model is that many face high private costs of LTC, and we set the costs of private care at \$50K as a fixed parameter in the model. In fitting with the low level of use in the general population, in only 14.3% of the households in our sample is there a member that has taken out a long-term care insurance policy that would provide benefits or reimbursement for LTC expenses. When we explicitly ask respondents to think of the costs of one year of private LTC, absent any LTC insurance coverage, the median estimate is \$35K, and 10% of respondents think the one-year stay will cost \$100K or more. Recall that in the pilot survey the average cost estimate was \$48.3K. The claim that private LTC is seen by many as involving high private costs appears warranted.

C.7 Characteristics of sample containing both singles and couples

Table 1 in this appendix reports the statistics from our survey and from the SCF for the sample of both singles and couples (all 938 respondents). Table II, located in the main text, reports the moments for the singles sample instead, because that is the sample we use in estimation. We discuss the properties of the full sample here, while all variable definitions and a description of the singles sample can be found in the main text.

Demographics In terms of demographics, the full sample has essentially the same age distribution as the singles sample. Compared to the sub-sample of 498 singles, the full sample of 938 contains more men (35% versus 26%), more retirees (81% versus 74%), more healthy people (68% versus 56%), slightly more respondents who completed college or better (44% versus 42%), more children (2.3 versus 1.9), more grandchildren (3.9 versus 3.3), and more home owners (76% versus 62%). In only 14.3% of the households in our sample is there a member that has taken out a long term care insurance policy that would provide benefits or reimbursement for LTC expenses. When we explicitly ask respondents to think of the costs of one year of private LTC absent any LTC insurance coverage, the median estimate is \$35K, and 10% of respondents think the one-year stay will cost \$100K or more.

Wealth Median retirement assets held in tax-favored dedicated retirement accounts (such as 401(k), IRA, 403(b), or other accounts) are \$14K, with an inter-quartile range (IQR) of 0-\$115K. Median financial wealth (bank accounts, money market accounts, stocks and shares, bonds, etc. excluding any assets held in dedicated retirement accounts) is \$15K, with an IQR of \$0.5K-\$125K. The median self-reported home value *among home owners* is \$160K, with IQR \$85K-\$289K. For 63% of homeowners, the primary mortgage is fully paid off. The 75th percentile of mortgage debt among home owners is \$35K; median home equity is \$137K. The table reports home values, mortgage debt, and home equity for the entire population, including renters. The median level of “other assets” (e.g. secondary home, cars, boats, art, private business assets) is \$20K, with an IQR of \$4K-\$70K, and ten percent own more than \$270K. On the debt side (Panel C of Table 1), more than half of the respondents have no credit card debt and the same is true for “other debt beside primary mortgage and credit card”. Among the credit card debt holders, the median debt is \$2K, while among those with other debt, the median debt is \$1K. The median net worth in our sample of couples and singles (Panel D) is \$225K. Finally, we asked those with partners to specify life insurance receipts due to each partner in event of the other’s death. We do not include these life insurance pay-outs in our wealth measure, given our focus on singles in the estimation.

Income and Consumption The median respondent has \$16K in retirement income and the mean is \$24K. The distribution of total income, defined as the sum of labor income and pension income, has a median of \$22K, and average of \$28K, and an inter-quartile range of \$14-35K; see Panel E of Table 1. Non-durable and services (NDS) consumption has a median of \$15K per year, an average of \$20K, and an IQR of \$9-\$26K. Total consumption has a median of \$18K, a mean of \$24K, and an IQR of \$11-\$31K.

Strategic Survey: Lock Box Question For the full sample of singles and couples, we continue to find that both public care aversion and bequest motives are important for a significant set of

Table 1: Summary Statistics: Singles and Couples

The left panel contains summary statistics for our 2006 survey of 938 retirees; it contains both singles and couples. The right panel contains statistics from the 2004 Survey of Consumer Finance. In the SCF we selected a sample that satisfies the same pre-screening criteria as our own sample: we exclude respondents below the age of 54, where either spouse works full-time or expects to work full-time, with combined household income from work above \$25K, and with children at home. This guarantees we are comparing mostly retirees to a sample of mostly retirees. The resulting SCF sample consists of 3,018 individuals. The summary statistics are computed using the SCF weighting scheme. The spending section in Panel F compares our spending data to those from the Consumer Expenditure Survey (CEX) instead of the SCF. We use the 2003-04 data from Krueger and Perri [2005]. The CEX numbers are highlighted in bold.

Moment	Our 2006 Survey					SCF 2004				
Percentile:	5	25	50	75	95	5	25	50	75	95
A: Demographics										
Age	55	59	64	69	77	59	67	74	80	87
Age Spouse	54	62	66	72	79	58	65	70	76	82
Number of children	0	1	2	4	5+	0	2	3	4	7
Number of grandchildren	0	0	2	6	10+					
B: Wealth (× \$1000)										
Retirement assets	0	0	14	115	605	0	0	0	20	268
Liquid financial assets	0	1	15	125	500	0	1	23	130	697
Primary home	0	15	120	240	605	0	26	103	224	500
Other assets	0	4	20	70	500	0	3	10	31	431
Total assets	0	54	242	681	1,700	2	64	203.4	510.3	1,624
C: Debt (× \$1000)										
Primary mortgage	0	0	0	8	125	0	0	0	0	95
Credit card	0	0	0	2	12	0	0	0	0	5
Other debt	0	0	0	0	14	0	0	0	0	23
Total liabilities	0	0	2	28	139	0	0	0	12	112
D: Net Worth (× \$1000)										
Home equity	0	5	90	210	550	0	20	100	200	500
Total net worth	-3	36	225	648	1,651	0	55	183	505	1,616
E: Income (× \$1000)										
Labor income	0	0	2	14	22	0	0	0	0	11
Retirement income	0	10	16	30	75	2	11	18	30	62
Total income	5	14	22	35	76	6	12	19	32	64
After-tax income	4	13	21	33	70					
F: Spending (× \$1000)										
Total spending	5	11	18	32	72					
Mortgage Debt	0	0	0	5	16	0	0	0	0	10
Maintenance and Rent	0	1	2	5	12	0	1	2	4	9
Durables	0	0	1	2	10					
Health	0	0	1	3	7					
Income Taxes	0	0	0	2	12					
Living expenses	1	4	9	16	34	1	3	4	6	10
Housing consumption	1	3	6	10	23	2	6	9	11	17
NDS consumption	4	9	15	26	50	4	7	11	17	31
Total consumption	5	11	18	31	61	6	11	17	27	69

retirees. The single largest group of respondents would split the money 50-50. If the prize is \$100K (two years of LTC), then 32% would split it evenly; if the prize is \$250K (five years of LTC) only 17% percent would split it evenly. The second most common answer is a polar answer: 0 or 100%. The second question with a \$250K prize has a more even distribution across answers than the first; it is more discriminating. There is a large positive correlation between the two questions: the correlation between the \$100K answer and the \$250K answer is 0.8. 126 respondents answer 0 to both questions (13.4%), 124 answer 50% to both, and 120 answer 100% to both questions. The 0% answer (100% to bequests) to the \$100K lock box question is twice as common among couples than among singles (18.4% vs 9.0% of respective samples).

Strategic Survey: End-of-Life Question As for the end-of-life question, 83% of all respondents prefer private LTC to Medicaid if the cost is \$50K. On average, the retirees in our sample would be willing to forgo 34% of the \$200,000 prize to stay in a private LTC facility rather than use government-funded LTC. The median answer is 25% of \$50K., with an IQR of 10-50%. 98 respondents (10.5% of sample) would be willing to give up 100% to avoid Medicaid.

D Representativeness

In this section, we compare properties of our sample to those of nationally representative surveys. Because the main text already discusses the singles sample, most of the ensuing discussion focuses on the full sample of singles and couples.

D.1 Comparison with Survey of Consumer Finance (SCF)

We compare our 2005 sample to the 2004 SCF sample in terms of demographics, wealth, and income. The Survey of Consumer Finance is widely recognized as the gold standard for wealth-related data. To make this comparison legitimate, we exclude respondents who satisfy one of the following criteria: below the age of 54, either spouse works full-time or expects to work full-time, combined household income from work above \$25K, and with children at home. This guarantees we are comparing mostly retirees to a sample of mostly retirees. The resulting sample consists of 3,018 individuals. Half are married; 81.3% of the SCF sample are homeowners, compared to 76% in our sample.

The right column of Table 1 reports summary statistics for the SCF that are defined in a parallel fashion to those on the same row in the left column (our sample). They use the SCF weighting scheme. The SCF weighting scheme means that the number of replicates we use is five times the 3,018 observations (15090). The SCF has a slightly older age distribution. To our surprise, the income and wealth distribution looks remarkably similar to ours. (By comparing our sample to

the weighted and the non-weighted SCF sample, we are able to conclude that our respondents are somewhat wealthier than the US population as a whole. The SCF is known to over-sample the wealthy, relative to other surveys such as the PSID or the AHEAD.) The only discrepancy is for the 95th percentile of retirement assets, where our measure is higher than the SCF's. One potential reason is that some of our sample may still be working part-time and not have converted retirement assets into liquid assets yet. Since we only use the sum of retirement and liquid assets in the analysis, this discrepancy is not material for our results. Total assets distributions look similar in our data and in the SCF data. We conclude that our sample seems broadly representative of the retiree group in terms of income and wealth.

We note a hump-shaped pattern in net worth, roughly between ages 54 and 69 for our survey and SCF respondents alike. Median net worth in our survey is \$55K at age 54-59, rises to \$104K at age 60-64, then falls to \$70K at age 65-69. Similarly, the median net worth in the SCF among respondents who satisfy our low labor income criterion climbs from \$8K for 54-59 to \$125K for those 60-64 and then falls back down to \$70K for those 65-69. Part of the increase in net worth between the 54-59 and 60-64 age groups is explained by households accumulating savings as they approach retirement. Since we focus on retirees, we exclude those working full time or those with more than \$25K of income per year from work; this excludes many households that are still working and saving for retirement. Since those that are working are often wealthier, this selection effect causes wealth for our 54-59 group to be lower than for the population at large. Indeed, when we do not impose this selection criterion on the SCF, the net worth goes from \$109K for ages 54-59 up to \$174K for ages 60-64 and then down to \$79K for ages 65-69. Clearly our focus on retirees exacerbates the hump in wealth across these three age groups.

While SCF spending data are limited, they still allow for a few sanity checks on our data: (i) SCF food spending is lower than our living expenses, (ii) SCF spending on rent and real estate taxes is lower than our category of maintenance, rent, and real estate taxes, and (iii) mortgage payments are on the same order. A much better data set to compare our consumption data to is the Consumer Expenditure Survey.

D.2 Comparison with the Consumer Expenditure Survey (CEX)

The CEX is known for having the best consumption data. We use the cleaned-up CEX data file from Krueger and Perri [2005], available on Perri's web site, and kept the most recent observations observations from 2003 and 2004.Q1. We then implemented a sample selection procedure that mimics the one from our survey: We dropped respondents younger than 55, those who report 35 or more hours worked per week, those with total labor income over \$25K, and those with children at home. Then we computed statistics for total and non-durable expenditures, as defined by Krueger and Perri, and housing consumption (rent or imputed rent). We converted all numbers to annual

rates and transformed them into current dollars. The numbers are in the right columns of Panel F of Table 1. Despite the Table’s “SCF 2004” heading, the numbers in Panel F are from the 2003-04 CEX. Median non-durable consumption expenditures are \$11K in the CEX and \$15K in our survey. The inter-quartile range is \$7-\$17K in the CEX and \$9-\$26K in our sample. Housing consumption data also look similar. The median is a bit lower than in the CEX, and the 95th percentile is a bit higher. There is some measurement error here due to the calculation of imputed rent. Total consumption expenditures, which includes items such as entertainment and vehicle purchases, looks very much in line with the data, with a median of \$15K in our sample versus \$16.9K in the CEX. Given the well-known difficulties with accurately measuring consumption at the individual level, this new evidence sheds a favorable light on the quality of our data.

D.3 Comparison with the Health and Retirement Survey (HRS)

We go to the HRS to compare the prevalence of long-term care insurance, annual LTC insurance premia, and the prevalence of a written will. In the 2006 HRS wave, 55% have a written will, 12% have LTC insurance, and annual LTC insurance premia have a mean of \$2,445, a median of \$1,776, and a standard deviation of \$8,015. Of our 938 survey respondents, 66% have a written will, 14% have LTC insurance, and annual LTC insurance premia have a mean of \$2,923, a median of \$1,500, and a standard deviation of \$8,422. Again, the numbers are close.

D.4 Comparing Wealth and Consumption profiles in Model and Data

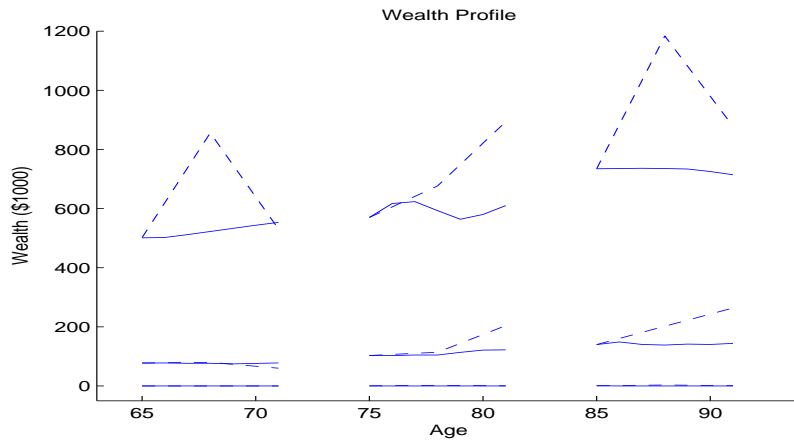
As an additional out of sample test of the model, it is instructive to compare wealth and consumption profiles to those observed in the SCF, CEX, and HRS data. We conclude that our simulations match the consumption and wealth profiles in the data reasonably well, even though these were not the moments of the data targeted by our estimation.

D.4.1 Wealth by Percentile

Figure 2 shows the evolution of the 10th, 50th and 90th percentiles of the wealth distribution for three different cohorts. It combines data and model in the same figure, as requested. The cohorts are those in the age ranges [62,68],[72,78] and [82,88] in 2001. The horizontal axis tracks the midpoint of each of these brackets. The dashed lines show the the 10th, 50th and 90th percentiles of wealth in the data, expressed in thousands of 2007 dollars. Since the tenth decile of wealth is essentially zero, we cannot not take logs of wealth. The sample consists of single retired households of the three cohorts described above, and followed over time in the 2001, 2004 and 2007 waves of the Survey of Consumer Finance. We compare the resulting empirical wealth profiles to those in the model. Model simulations use the characteristics (demographics) of the 2001 SCF sample as an

input. The solid lines are the results of model simulations under our benchmark parameters. The figure shows that, for the youngest cohort, we do a good job matching the wealth profiles. Although we do not capture the full pattern of the 90th percentile, which rises and falls across the three waves of the SCF, our predicted distribution after six years looks quite close to the distribution in the data. For the older two cohorts, our model predicts that the profiles should look flat while in reality, the data show an increase in wealth for these cohorts. Some of this difference might be explained by differential investment opportunities for the wealthy or by differential mortality rates between rich and poor. Because wealthier people tend to live longer, members of the cohort who survive from one wave to the next tend to be richer. This effect is abstracted from in our model.

Figure 2: Wealth Profiles by Wealth Percentiles: SCF Data and Model Simulations

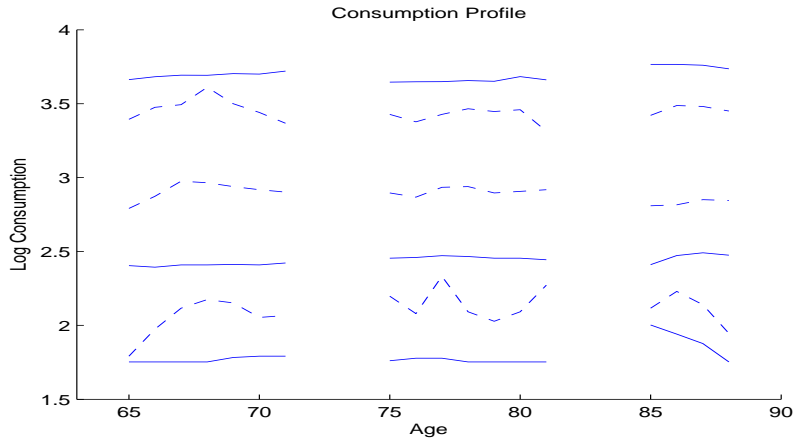


D.4.2 Consumption by Percentile

Figure 3 combines consumption profiles in model and in data. The dashed lines show the 10th, 50th and 90th percentiles of the distribution of consumption from the 1997, 2000 and 2003 waves of the CEX for those who were in the age ranges $[62,68]$, $[72,78]$ and $[82,88]$ in 1997. They are expressed in logs of thousands of 2007 dollars. The solid lines are the consumption profiles from the same set of simulations used in the wealth figure above. The levels of consumption are slightly off: our simulations predict consumption that is too high at the top of the distribution and too low at the bottom of the distribution. However, the time trends in the data are well matched by our simulations. We correctly predict that consumption rises slightly for the youngest cohort over time, possibly because the surviving members of the cohort tend to be the ones who were not hit by large medical shocks. Consumption profiles are flat for the middle cohort and only decline significantly at the bottom of the distribution for the oldest cohort.

Figure 3: Consumption Profiles by Consumption Percentiles: CEX Data and Model Simulations

The figure shows the tenth, fiftieth, and ninetieth percentiles of the wealth distribution for three cohorts.



D.4.3 Wealth by Health

We also compare wealth profiles in model and in data, sorted *by health state*. To do so, we collected additional information from the Survey of Consumer Finances on the health status of SCF respondents. Fortunately, such health information is available, albeit in slightly different form as in our survey. In particular, health status is on a four point scale (4= excellent, 3 = good, 2 = fair, 1 = poor), while the health status in our model is measured on a 3 point scale (1 = good, 2 = poor, 3 = in long-term care). In order to compare model to data, we reclassify those in HRS health states 4 and 3 into our health state 1, and HRS health states 2 and 1 into our health state 2. Unfortunately, the SCF has no information on long-term care, so that we cannot report data for our health state 3. We thus obtain three cohorts, three dates (2001, 2004, and 2007) and two health states. The median cell size among these 18 groups is 150 observations. The wealth profiles in the model are constructed in the same fashion as in Section D.4.1 above. Figure 4 shows the results; solid lines are simulations, dashed lines are data. Health states 1, 2, and 3 have different colors: blue, red, and green, respectively. The model predicts that healthier agents are wealthier, in each cohort. Agents in the long-term care state (state 3, in green) are the poorest and are running down their assets, consistent with the high out-of-pocket expense associated with this health state. For the other two health states, the model predicts intermediate wealth levels for those in poor health (state 2, in red), with an upward sloping profile for the youngest and oldest cohort. For the middle cohort, wealth is flat. The data are consistent with these patterns: intermediate wealth levels that are increasing over time for the youngest and eldest cohorts, and essentially flat for the middle cohort. For the good health state (state 1, in blue), model and data are close in level and pattern

for the youngest cohort, and show wealth decumulation. For the middle and oldest cohorts in good health, the model under-predicts wealth accumulation. Especially the healthiest among the very old (82-88) accumulate more wealth in the data than in the simulations. This discrepancy may simply be a small sample issue (there are about 100 observations in this group in 2004 and 2007), it may arise from our coarse mapping of health states, or it may reflect differential mortality by wealth mentioned above. Models that allow for endogenous investment in health, as Yogo (2009) or Denardi, French, and Jones (2010), may be able to increase the correlation between health and wealth for the very old. Such an extension is beyond the scope of this paper.

Figure 4: Wealth Profiles by Health Status: SCF Data and Model Simulations

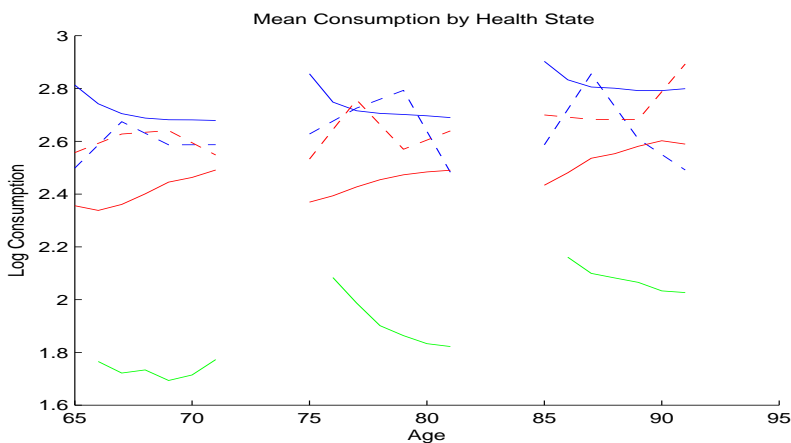


D.4.4 Consumption by Health

Finally, we compare consumption profiles, *by health state*, in model and in data. This turns out to be a substantially more challenging task because the CEX consumption data set we use above has no health status information. The only available data is the Consumption and Activities Mail Survey (CAMS), a bi-annual survey that collects consumption data from a subset of HRS households. This CAMS data is relatively unexplored and is not part of the cleaned-up RAND version of the HRS. The CAMS data consists of four waves (2001, 2003, 2005, and 2007) with sample sizes of 3866, 3254, 5815, and 5612, respectively. For all four available waves, we form a measure of non-durable and services consumption, which includes housing services but excludes expenditures on durables and health, just as in our own survey and in the CEX. We also form total consumption that includes all categories. We exclude households that have nondurable consumption less than \$1000 and more than \$50,000 in a given year. We then connect the CAMS to the HRS data using the household identifier and person number. One complication here is that the HRS is done in

even years, while the CAMS is conducted in odd years. We link the 2001 CAMS to the 2000 HRS, the 2003 CAMS to the 2002 HRS, etc. This matching allows us to only keep single households (throughout all waves) and to obtain the age and health status of the CAMS respondents. As in the rest of our analysis, we exclude individuals younger than 51 years old. We are left with 666 single households for which we have age, health, and four consumption observations. Seven respondents didn't rate their health in all 4 waves of the HRS. As was done with the RAND version of the HRS, we simply made their health rating the same as in the previous wave in such instances. An additional difficulty is that the health status in the HRS is measured on a five point scale (5= excellent, 4 = good, 3 = average, 2 = below average, 1 = poor), while the health status in our model is measured on a 3 point scale (1 = good, 2 = poor, 3 = in long-term care). In order to compare model to data, we reclassify those in HRS health states 5, 4, and 3 into our health state 1, and HRS health states 2 and 1 into our health state 2. We have no readily available long-term care information for these respondents, so we have no health state 3 in the data. The cohorts are defined as in Section D.4.2 above. This brings the sample to 377 out of 666 individuals. We simulate our model, again following the same procedure as in Section D.4.2. As in the wealth plot above, we show average log consumption in health states 1 and 2 in the data (dashed lines) and log consumption for all three health states in the model (solid lines). Health states 1, 2, and 3 have different colors: blue, red, and green, respectively. Figure 5 shows the results. In the model, consumption is higher in good health than in poor health and higher in poor health than in long-term care. The differences between good and poor health are not very large, though. The CAMS data also show that average consumption is not so different in good and poor health. Furthermore, in both model and data, consumption is not that different by across cohorts. Model simulations are about on target; model-predicted consumption in the good health state (state 1) is a bit higher than in the data and model-predicted consumption growth in poor health (state 2) is a bit lower than in the data. We also capture the decrease in consumption over time for the good health state and the (slight) increase over time for the bad health state. The increase in consumption in the poor health state arises because being in the bad health state makes it increasingly likely to go into long-term care state. Every period one stays out of LTC is like receiving a positive wealth shock. For the good health state, the decrease arises as in the standard life cycle model, where the consumption profile is downward sloping because the mortality-adjusted discount factor becomes lower than one over the return on assets. While the match is obviously not perfect, given the difficulty in mapping the health state in the model and in the data, we conclude that the model does a reasonably good job matching the CAMS consumption profiles.

Figure 5: Consumption Profiles By Health Status: CAMS data and Model Simulations



E Plausibility of strategic survey questions

In this appendix, we present evidence that our strategic survey questions prompted intuitively plausible responses. This discussion focusses on the full sample of 938 respondents.

E.1 Children

In confirmation of the generally sensible nature of the survey responses, we find that respondents with children (80% of the sample) uniformly display a greater concern with bequests. The average fraction of the \$100K lock box (250K box) allocated to LTC, $pctltc1$ ($pctltc2$), is 68.5% (64%) for respondents without children, while it is 51.5% (47%) for those with children. The same comparison but for the median instead of the average fraction is 80% (70%) versus 50% (50%). Likewise, for the end-of-life question, the fraction allocated to avoid public long-term care (and hence allocated towards private LTC) is 42.5% for those without children and 31.5% for those with children ($pctltc3$). The null hypotheses that the sample means are the same in the group with and without children are strongly rejected for all three variables. As an aside, the number of children is also negatively related with the $pctltc$ variables. However, what matters is whether the respondent has children or not. In a regression of the $pctltc$ variables on both the $withkids$ dummy and the discrete $numkid$ variable, the dummy $withkids$ drives out $numkid$. Figure 6 shows that there are not only different means and medians for the survey answer distributions, but that the entire distribution looks different. The top panel plots $pctltc2$, the bottom panel $pctltc3$. For example, there is a much higher propensity to allocate everything to LTC (nothing to bequests) for those without children. Vice versa, there is a much higher propensity to allocate nothing to

Table 2: Correlation Matrix

This table presents the correlation between the answers to the strategic survey questions, the net worth, assets, permanent income (*inc10*), and number of children (*numkid*) for the 938 respondents in our survey. The survey answers indicate the fraction of the \$100K lock box that the respondent would allocate to long-term care (*pctltc1*), that same fraction but for the \$250K lock box *pctltc2*, and the fraction of \$200K the respondent would be willing to spend to avoid a public long-term care facility at the end-of-life at the expense of the bequest (*pctltc3*).

	<i>pctltc1</i>	<i>pctltc2</i>	<i>pctltc3</i>	<i>networth</i>	<i>assets</i>	<i>inc10</i>	<i>numkid</i>
<i>pctltc1</i>	1.00						
<i>pctltc2</i>	0.80	1.00					
<i>pctltc3</i>	0.27	0.28	1.00				
<i>networth</i>	-0.07	-0.10	0.08	1.00			
<i>assets</i>	-0.07	-0.10	0.08	0.99	1.00		
<i>inc10</i>	-0.14	-0.15	0.06	0.61	0.61	1.00	
<i>numkid</i>	-0.14	-0.14	-0.12	-0.02	-0.02	0.07	1.00

LTC (everything to bequests) for those with children.

E.2 Wealth and Income

Table 2 shows the pairwise correlation matrix between the strategic survey answers, net worth, permanent income, and the number of children. Note that while the two types of survey answers have a positive correlation of 0.27 (*pctltc1* and *pctltc3*) and 0.28 (*pctltc2* and *pctltc3*), there is independent information in each question. The most interesting finding in this regard is that assets, net worth, and permanent income are positively correlated with the answer to the lock box questions, but negatively with the end-of-life question. It appears that wealthier households allocate more of the locked box to bequests, but they dislike public long-term care more as well. This is intuitively reasonable. Consider a high wealth individual with dominant public care aversion. In answer to the former question on the marginal allocation of a lottery win, such a respondent may elect to use all or most for a bequest. Indeed, the wealthy respondent is not at risk of needing the LTC money, and allocating the money to the bequest box assures that the heirs will receive the money. However, if pushed to the wall with little wealth left, as in the end of life question, they would elect private LTC. It is a measure of the seriousness with which these questions were taken that responses difference precisely along these lines.

While there are no formal findings to this effect, the “folk wisdom” in the area of bequest motives is that they are minimal for all but the wealthiest households. Our survey results provide no support for this view. If one aggregates across the sample as a whole, there is no systematic

Table 3: Tobit Estimates

This table presents OLS and Tobit regressions of the survey answers ($pctltc1$, $pctltc2$, $pctltc3$) on net worth or income and their interaction with a dummy measuring whether the respondent has children. The top panel uses net worth, the bottom panel uses permanent income (measured as after tax income in 2010). The left panel reports OLS regression results. *** denotes significance at the 1% level according to robust standard errors. The right panel reports Tobit regressions. Net worth is expressed in units of \$100,000. Permanent income is expressed in units of \$10,000. Each regression contains 938 observations.

	OLS Regressions			Tobit Regressions		
	pctltc1	pctltc2	pctltc3	pctltc1	pctltc2	pctltc3
constant	0.567***	0.532***	0.316***	0.607***	0.542***	0.313***
networth	0.012***	0.011***	0.014***	0.023***	0.018***	0.017***
networth \times withkids	-0.020***	-0.021***	-0.011***	-0.037***	-0.032***	-0.014***
R^2	2.91%	4.03%	1.73%	1.57%	2.89%	1.67%
constant	0.604***	0.562***	0.321***	0.681***	0.588***	0.324***
income	0.011	0.012	0.027***	0.018	0.016	0.030***
inc \times withkids	-0.038***	-0.037***	-0.026***	-0.066***	-0.054***	-0.030***
R^2	3.68%	4.23%	1.33%	2.04%	2.92%	1.11%

relationship whatever between wealth or income and survey responses. Yet such a relationship can be identified if one conditions on whether or not there are children. We ran both OLS regressions and Tobit regressions which take into account that the dependent variable ($pctltc$) is bounded between zero and one. The right-hand side variables are net worth and net worth interacted with the $withkids$ dummy. The coefficient on the first regressand is the effect of net worth on the fraction allocated to LTC for those without children; the coefficient on the second regressand is the same effect but for those with children. The main message from Table 3 is that respondents without children allocate more money towards LTC (and less towards bequests) the wealthier they are. The exact opposite is true for respondents with children. The wealthier they are, the more they allocate towards a bequest. Each \$10K in income or \$100K in net worth *increases* the fraction allocated to the bequest by 2-4% for those with children and *reduces* that same fraction by about 1% for those without children. The difference between these groups is highly statistically significant.

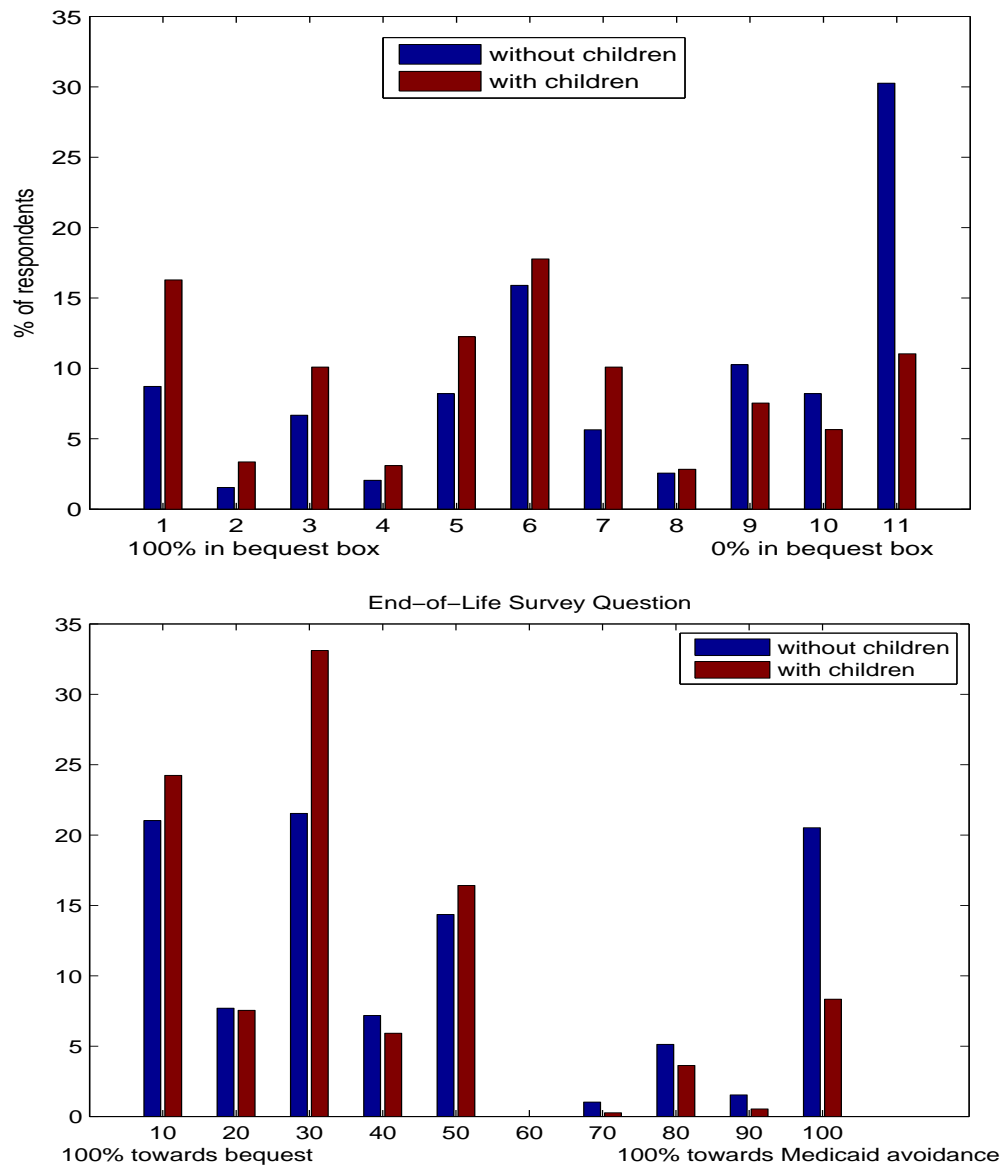
We also asked our respondents for their willingness to pay for perfect LTC insurance. We regress the survey answers $pctltc1$, $pctltc2$, and $pctltc3$ on net worth, net worth interacted with the $withkids$ dummy, and the willingness to pay for perfect LTC insurance. We find that the results from Table 3 remain unaffected. In addition, the willingness to pay enters significantly positively. An extra \$1,000 willingness to pay increases $pctltc$ by an additional 1.17-1.64%.

E.3 Planning-Type Questions

As a further check on the validity of our strategic survey questions and of our inferences, we asked several planning-type questions. We asked the respondents whether they own a LTC insurance policy; 14.3% of our respondents do. We find that those with LTC insurance have a lower propensity to allocate money to the LTC locked box than those without a policy. At the same time, when faced with a contingency without LTC at the end-of-life, they are more likely to pay to avoid publicly provided LTC. We asked the remaining 85.7% of the sample whether they had seriously considered taking out LTC insurance. The 27% of those that had considered it allocate a significantly larger fraction of the lock box to LTC and do the same at the end-of-life. As mentioned above, we asked all respondents how much they think a year in LTC would cost out-of-pocket given all the insurance they have in place. We find that the more they think it will cost, the more they allocate to LTC in the strategic survey questions. We also asked the respondents whether they had (i) a written will, (ii) established a trust, or (iii) consulted with a financial planner. All three variables are significantly negatively correlated with the percent of money allocated to the long-term care lock-box. Those with demonstrated intentional bequest motives end up allocating more towards bequests. This planning-type evidence lends further credibility to our -more quantitative- strategic survey questions.

Figure 6: Strategic Survey Questions for Respondents With and Without Children

The top panel plots the distribution of survey answers to the \$250K lock box question (*pctltc2*). The answers range from 0% to 100% allocated to the LTC lock box. The bottom panel plots the answer to the end-of-life survey question (*pctltc3*). Both panels are based on the entire sample of 938 respondents.



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Spending and Saving in Retirement

We currently don't know much about how retirees plan to use their assets in retirement. Yet these plans are of increasing importance as the baby-boom generation approaches retirement. This survey is intended to help us understand what resources you have, and how you anticipate using these resources. The survey should take approximately 20-30 minutes to complete. Note that we ask a number of questions concerning your wealth and income, and you should complete this survey only if you are comfortable answering questions on these subjects. Thank you for your time.

A. Preliminary Questions

1. In what year were you born? [drop-down - Before 1916, 1916, 1917,1950, 1951, After 1951] **[terminate if "after 1951" or "before 1916"]**

Quota's

- maximum 40% answer 1947-51
- maximum 40% answer 1941-46
- maximum 40% answer 1936-40
- maximum 40% answer 1930-35

2. Which of the following best describes your employment status? **{QT-SS}**

- a. Employed full time **[terminate]**
- b. Employed part time
- c. Not employed but looking for work **[terminate]**
- d. Retired
- e. Other (Please specify: _____)

3. How would you describe the current status of your health? (Select one answer.) **{QT-SS}**

- a. In need of Long Term Care (i.e., care provided on a regular basis, for three months or more, for age related or other chronic conditions) **[terminate]**
- b. Not needing Long Term Care, but living with serious medical problems (i.e., conditions that are not debilitating but are persistent and expensive to treat)
- c. Neither in Long Term Care, nor having serious medical problems

4. What is the highest level of formal education that you have completed? **{QT-SS}**

- a. Did not complete high school
- b. High school diploma
- c. Started but did not complete a post high school (e.g. college) degree
- d. Completed a post high school degree
- e. Started but did not complete post-graduate work (e.g. law school, MBA, PhD)
- f. Completed a post graduate degree

5. What is your gender? **{QT-SS}**

- a. Male
- b. Female?

6. Which of the following best describes your household? {QT-SS}

- a. Single with children at home [terminate]
- b. Single – children have left home
- c. Single with no children
- d. Couple with children at home [terminate]
- e. Couple – children have left home
- f. Couple with no children
- g. Other [terminate]

Quotas

- maximum 375 answer Couple – children have left home
- maximum 375 answer Couple with no children

7. [If relevant (Yes to 6e or 6f)]

- a. In what year was your spouse/partner born? [drop-down - Before 1916, 1916, 1917,1964, 1965, After 1965]
- b. Is your spouse/ partner currently employed full time or looking for full time work?
{QT-SS}
Yes [terminate if Y]
No
- c. Is your spouse/partner in need of long term care (care provided on a regular basis for three months or more for age related or other chronic conditions) {QT-SS}
Yes [terminate if Y]
No

Note: * for all best estimate boxes ... please use the range that they selected in the corresponding question.*

Note: for ALL the “best estimate” boxes, if the respondent selects a category with no upper bound, allow up to 9,999,999 dollars in the box.

8. We are interested in your household’s total pre-tax income last year [2005] from all sources, and in your household’s expected income several years in the future [2010]. Please answer all of these questions about future income in terms of **today’s prices** (i.e. as if prices were to stay unchanged for the next five years).

- a. Which of the following ranges reflect your household’s total income from work in **2005**?
{QT-SS}
Zero
\$1-4,999
\$5,000-9,999
\$10,000-14,999
\$15,000-19,999

\$20,000-24,999
\$25,000+ [terminate]

NOTE – for everything other than zero in Q8a ... allow response in a1. below:

Note: If selected 'Zero' allow only zero or blank in best estimate box. Code zero differently from blank in datafile. Please put best estimate boxes on same page.

a1. Please enter your best estimate (in dollars).

- b. Which of the following ranges reflect your household's *expected* total income from work in **2010**? (Please answer this question **assuming prices will remain unchanged for the next five years**).{QT-SS}

Zero

\$1-4,999

\$5,000-9,999

\$10,000-14,999

\$15,000-19,999

\$20,000-24,999

\$25,000+ [terminate]

NOTE – for everything other than zero in Q8b ... allow response in b1. below:

Note: If selected 'Zero' allow only zero or blank in best estimate box. Code zero differently from blank in datafile. Please put best estimate boxes on same page.

b1. Please enter your best estimate (in dollars).

- c. Which of the following ranges reflect your household's total income in **2005** from Social Security, government pensions, and any regular employer pension payments? {QT-SS}

Zero

\$1-4,999

\$5,000-9,999

\$10,000-14,999

\$15,000-19,999

\$20,000-29,999

\$30,000-39,999

\$40,000-49,999

\$50,000-59,999

\$60,000-69,999

\$70,000+

NOTE – for everything other than zero in Q8c ... allow response in c1. below:

Note: If selected 'Zero' allow only zero or blank in best estimate box. Code zero differently from blank in datafile. Please put best estimate boxes on same page.

c1. Please enter your best estimate (in dollars).

- d. Which of the following ranges reflect your household's **expected** total income in **2010** from Social Security, government pensions, and any regular employer pension payments? **(Please answer this question assuming prices will remain unchanged for the next five years.) {QT-SS}**

Zero

\$1-4,999

\$5,000-9,999

\$10,000-14,999

\$15,000-19,999

\$20,000-29,999

\$30,000-39,999

\$40,000-49,999

\$50,000-59,999

\$60,000-69,999

70,000+

NOTE – for everything other than zero in Q8d ... allow response in d1. below:

Note: If selected 'Zero' allow only zero or blank in best estimate box. Code zero differently from blank in datafile. Please put best estimate boxes on same page.

d1. Please enter your best estimate (in dollars).

9. Please provide us with your best estimate of the current market value of each item that you (and/or your partner, if applicable) own.

- a. Roughly how much does your household have in tax-favored dedicated retirement accounts, such as 401(k), IRA, 403(b), or other? **{QT-SS}**

\$0-24,999

\$25,000-49,999

\$50,000-74,999

\$75,000-99,999

\$100,000-149,999

\$150,000-199,999

\$200,000-299,000

\$300,000-399,999

\$400,000-499,999

\$500,000-749,000

\$750,000+

[Insert a box to enter numbers and ask below on same page:]

a1 Please enter your best estimate (in dollars).

- b. Roughly how much does your household have in liquid financial assets such as bank accounts, money market accounts, stocks and shares, bonds, etc, **excluding** any assets held in dedicated retirement accounts? **{QT-SS}**

\$0-9,999
\$10,000-19,999
\$20,000-29,999
\$30,000-39,999
\$40,000-49,999
\$50,000-74,999
\$75,000-99,999
\$100,000-149,999
\$150,000-199,999
\$200,000-299,000
\$300,000-399,999
\$400,000-499,999
\$500,000+

[Insert a box to enter numbers and ask below on same page:]

b1. Please enter your best estimate (in dollars).

- c. Do you own the home in which you currently reside? [Y/N] **{QT-SS}**
Yes
No

- a. **[If Y to 9c]** Please provide your best estimate of how much you expect to receive for your home if you were to sell it in the next few months.

Less than \$100,000
\$100,000-149,999
\$150,000-199,999
\$200,000-249,999
\$250,000-299,999
\$300,000-349,999
\$350,000-399,999
\$400,000-499,999
\$500,000-599,999
\$600,000-699,999
\$700,000+

[Insert a box to enter numbers and ask below on same page:]

a1. Please enter your best estimate (in dollars).

- d. **[If living in couple (6e or 6f)]** Please provide your best estimate of any life insurance proceeds payable to *your partner* upon *your* death. **{QT-SS}**
- \$ Zero (No insurance on my life)
 - \$1-24,999
 - \$25,000-49,999
 - \$50,000-74,999
 - \$75,000-99,999
 - \$100,000-149,999
 - \$150,000-199,999
 - \$200,000-299,000
 - \$300,000-399,999
 - \$400,000-499,999
 - \$500,000-749,000
 - \$750,000+

- e. **[If living in couple (6e or 6f)]** Please provide your best estimate of any life insurance proceeds payable to *you* upon *your partner's* death. **{QT-SS}**
- \$ Zero (No insurance on spouse / partner life)
 - \$1-24,999
 - \$25,000-49,999
 - \$50,000-74,999
 - \$75,000-99,999
 - \$100,000-149,999
 - \$150,000-199,999
 - \$200,000-299,000
 - \$300,000-399,999
 - \$400,000-499,999
 - \$500,000-749,000
 - \$750,000+

- f. Which range reflects the current market value of all of your household's other assets **excluding** your primary home, liquid financial assets, life insurance, and dedicated retirement accounts? (These assets may include your secondary home, cars, boats, art, private business assets, and the like.) **{QT-SS}**
- \$0-24,999
 - \$25,000-49,999
 - \$50,000-74,999
 - \$75,000-99,999
 - \$100,000-149,999
 - \$150,000-199,999
 - \$200,000-299,000
 - \$300,000-399,999
 - \$400,000-499,999
 - \$500,000-749,000
 - \$750,000+

[Insert a box to enter numbers and ask below on same page:]

f1 Please enter your best estimate (in dollars).

Quota:

- Question 9a: maximum 40% Below \$25,000
- Question 9a: maximum 90% Below \$75,000
- Question 9b: maximum 40% Below \$50,000
- Question 9b: maximum 90% Below \$100,000
- Question 9c: maximum 30% answer No

You want no more than 40% (or $1500 \times 0.4 = 600$ respondents) below \$25,000. However in total, no more than 90% (or $1500 \times 0.9 = 1350$ respondents) can be below \$75,000 (INCLUDING those max. 600 people below \$25k). YES

Same logic for Q9b.

10. We are interested now in the current level of outstanding debt that you (and/or your partner if applicable) owe.

10.

- a. **[If Y to 9(c)]** How much mortgage debt is currently outstanding on your primary residence? **{QT-SS}**

Zero

\$1- 49,999

\$50,000-99,999

\$100,000-149,999

\$150,000-199,999

\$200,000-249,999

\$250,000-299,999

\$300,000-349,999

\$350,000-399,999

\$400,000 – 499,999

\$500,000+

[IF RANGE CHOSEN ABOVE HAVE \$5K INTERVALS (that is, ranges starting with \$1-4,999): Insert a box to enter numbers and ask below:]

a1 Please enter your best estimate (in dollars).

- b. Which range reflects your total unpaid credit card balance after you sent in your last monthly payments? **{QT-SS}**

Zero

\$1-4,999

\$5,000-9,999

\$10,000-14,999

\$15,000-19,999

\$20,000-29,999

\$30,000-39,999

\$40,000-49,999

\$50,000-59,999
\$60,000-69,999
\$70,000+

[IF RANGE CHOSEN ABOVE HAVE \$5K INTERVALS (that is, ranges starting with \$1-4,999): Insert a box to enter numbers and ask below:]

b1 Please enter your best estimate (in dollars).

c. Which range reflects the value of your household's other debts beyond mortgages on your primary residence and credit card debts? **{QT-SS}**

Zero
\$1-9,999
\$10,000-24,999
\$25,000-49,999
\$50,000-74,999
\$75,000-99,999
\$100,000-149,999
\$150,000-199,999
\$200,000-299,999
\$300,000-399,999
\$400,000-499,999
\$500,000+

[IF RANGE CHOSEN ABOVE HAVE \$5K INTERVALS (that is, ranges starting with \$1-4,999): Insert a box to enter numbers and ask below:]

c1 Please enter your best estimate (in dollars).

11. [Insert drop box with single numbers ranging from zero to five or more. Then ask below:]

How many children do you (and your spouse/partner, if applicable) have in total from current and former relationships? **{QT-SS}**

[If answer above is greater than zero, insert a box to enter numbers and ask below:]

a. How many of these children are female? **{numeric OE} lv-0 hv-10**

12. [Insert drop box with single numbers ranging from zero to ten or more. Then ask below:]

How many grandchildren do you (and your spouse/partner, if applicable) have in total from current and former relationships? **{QT-SS}**

Bequests and Long Term Care

13. Do you have a written will? **{QT-SS}**

- Yes
- No

14. Have you ever established a trust or entered into any other legal or financial arrangements in order to more efficiently transfer assets to your partner, children, heirs, or other worthy causes, upon your death? **{QT-SS}**

- Yes
- No

15. Have you ever made an appointment with a financial planner, accountant, or lawyer to inquire about how to reduce your possible estate or inheritance tax liability after your death? **{QT-SS}**

- Yes
- No

16. Has anyone in your household taken out a private Long Term Care (LTC) insurance policy that would provide benefits or reimbursement for your household's Long Term Care expenses ? **{QT-SS}**

- Yes
- No

a. **[If Yes in 16, insert a box to enter numbers and ask below:]**

What is the annual premium cost in 2005? **{numeric OE} lv-1 hv-9999999**

b. **(If N in 16)** Have you ever given serious consideration to taking out such a policy?

- Yes
- No

Note: please have Q17a and b on same page.

17. Suppose that you were to have a condition that will require long-term care at some point in the future, and were considering the option of going to a private LTC facility to receive this care. Please assume the following:

- You will need to finance a one year stay in the private LTC facility.
- The prices of the things that you buy (including Long-Term Care) are the same as the prices for those same things in 2005.

a. Given all of the insurance that you currently have in place, how much would you expect to pay for this one year stay over and above any amounts paid by insurance? **{numeric OE} lv-0 hv-9999999**

b. Suppose you have **no medical or LTC insurance**. Now what would you expect to be the out of pocket cost to you of this one year stay? **{numeric OE} lv-1 hv-9999999**

Make sure that the Q17a answer is no greater than the Q17b answer IF Q16=Yes

Hypothetical Scenarios

We now ask three questions concerning what you would choose in **hypothetical scenarios**. Note that these scenarios are distinct. For each question, you should focus only on the scenario that it poses, treating those that came before as irrelevant.

In the first question, we hypothesize that tomorrow morning you will win a monetary prize that is available for your use only for specific circumstances in later life. In particular, the prize must immediately be divided up between a **bequest locked box** and a **long term care locked box**. Money sitting in either of these boxes will keep its current purchasing power over time. You (and your spouse/partner, if applicable) are not to inform or indicate to anyone else that you have won this prize.

- **Bequest Box.** All the money in this box will be passed on to your beneficiaries upon your death. The money has absolutely no impact on the resources that are available to you while alive.
- **Long Term Care Box.** This box can be accessed only to pay for private long term care costs for you and/or your partner. There is no other expense that the prize can be used for.

[Above Text on One Introductory Screen: Question on following screen]

18. The questions we now pose concern **how you would divide** money between these boxes.

- a. Suppose you had \$100,000 to divide up between the two boxes. Assume that each year of LTC costs \$50,000 so that the amount you have will be sufficient to cover private LTC costs for one household member for a total of two years. Which of the following options would you most prefer? **{QT-SS}**

- Put \$100,000 in the bequest box and \$0 in the long term care box
- Put \$90,000 in the bequest box and \$10,000 in the long term care box
- Put \$80,000 in the bequest box and \$20,000 in the long term care box
- Put \$70,000 in the bequest box and \$30,000 in the long term care box
- Put \$60,000 in the bequest box and \$40,000 in the long term care box
- Put \$50,000 in the bequest box and \$50,000 in the long term care box
- Put \$40,000 in the bequest box and \$60,000 in the long term care box
- Put \$30,000 in the bequest box and \$70,000 in the long term care box
- Put \$20,000 in the bequest box and \$80,000 in the long term care box
- Put \$10,000 in the bequest box and \$90,000 in the long term care box
- Put \$0 in the bequest box and \$100,00 in the long term care box

Programming: Maintain two lists of the above options: One in the order above (high amounts in bequests to low amounts in bequests), one ordered in exactly the reverse order, as follows:

- Put \$100,000 in the long-term care box and \$0 in the bequest box
- Put \$90,000 in the long-term care box and \$10,000 in the bequest box
- Put \$80,000 in the long-term care box and \$20,000 in the bequest box
- Put \$70,000 in the long-term care box and \$30,000 in the bequest box
- Put \$60,000 in the long-term care box and \$40,000 in the bequest box
- Put \$50,000 in the long-term care box and \$50,000 in the bequest box
- Put \$40,000 in the long-term care box and \$60,000 in the bequest box
- Put \$30,000 in the long-term care box and \$70,000 in the bequest box
- Put \$20,000 in the long-term care box and \$80,000 in the bequest box
- Put \$10,000 in the long-term care box and \$90,000 in the bequest box
- Put \$0 in the long-term care box and \$100,00 in the bequest box

Programming: (high amounts in ltc to low amounts in ltc). Randomly present one of the two lists to respondents.

- b. Suppose instead that you had \$250,000 to divide up between the two boxes. Assume that each year of LTC costs \$50,000, so the amount you have will be sufficient to cover five years of private LTC costs. Which of the following options would you most prefer in this case? {QT-SS}

- Put \$250,000 in the bequest box and \$0 in the long term care box
- Put \$225,000 in the bequest box and \$25,000 in the long term care box
- Put \$200,000 in the bequest box and \$50,000 in the long term care box
- Put \$175,000 in the bequest box and \$75,000 in the long term care box
- Put \$150,000 in the bequest box and \$100,000 in the long term care box
- Put \$125,000 in the bequest box and \$125,000 in the long term care box
- Put \$100,000 in the bequest box and \$150,000 in the long term care box
- Put \$75,000 in the bequest box and \$175,000 in the long term care box
- Put \$50,000 in the bequest box and \$200,000 in the long term care box
- Put \$25,000 in the bequest box and \$225,000 in the long term care box
- Put \$0 in the bequest box and \$250,000 in the long term care box

[Programming: – same order as in question 18a.] – Meaning if 18a is high amounts in bequests to low amounts in bequests use the above order, while if 18a is high amounts in ltc to low amounts in ltc, use the precise reverse of the above order, as follows:

- Put \$250,000 in the long-term care box and \$0 in the bequest box
- Put \$225,000 in the long-term care box and \$25,000 in the bequest box
- Put \$200,000 in the long-term care box and \$50,000 in the bequest box
- Put \$175,000 in the long-term care box and \$75,000 in the bequest box
- Put \$150,000 in the long-term care box and \$100,000 in the bequest box
- Put \$125,000 in the long-term care box and \$125,000 in the bequest box
- Put \$100,000 in the long-term care box and \$150,000 in the bequest box
- Put \$75,000 in the long-term care box and \$175,000 in the bequest box
- Put \$50,000 in the long-term care box and \$200,000 in the bequest box
- Put \$25,000 in the long-term care box and \$225,000 in the bequest box
- Put \$0 in the long-term care box and \$250,000 in the bequest box

ROTATE: present one of the two lists to respondents.

19. Our second hypothetical question concerns your interest in a **hypothetical** long term care insurance policy that functions perfectly. To answer this question, please consider a situation in which you were to find out tomorrow that your household had **absolutely no coverage** for any private long term care expenses. In addition:
- A perfect private long term care insurance policy had become available, in which all such expenses would be paid without exception (i.e., lifetime coverage for the full cost of private LTC with no deductible and full inflation protection).
 - The prices of the things that you buy in all future years (including long-term care) are the same as the prices for those same things in 2005.

Assuming that you have no LTC insurance, what is the maximum amount that you would be willing to pay each year in premiums to obtain such a perfect policy? {QT-SS}

- \$0-249
- \$250-499

\$500-999
\$1,000-1,499
\$1,500-1,999
\$2,000-2,999
\$3,000-3,999
\$4,000-4,999
\$5,000-7,499
\$7,500-9,999
\$10,000-12,999
\$13,000-14,999
\$15,000-19,999
\$20,000-29,999
\$30,000 +

Note: on own page

Our final scenario concerns a purely hypothetical situation in which:

- you are of age 85 and are the sole surviving member of your household;
- you are in need of long term care (LTC) yet have absolutely no long term care insurance;
- you know that you have exactly one year left to live and will need to spend it in a long term care facility
- you have sold your home, and you have total available wealth that is worth \$200,000 at today's prices.
- Your total income net of taxes that year is \$25,000 (again in terms of current prices).

Note all of Q20 on one page.

20. We are interested in your choice between LTC that is privately financed and government provided LTC that is financed through Medicaid. This choice impacts your LTC options and the bequest that you leave to your beneficiaries as follows.

- Option A: Use Medicaid funded LTC. The government will pay for your LTC, allowing you to leave all \$200,000 as a bequest. However, using Medicaid restricts your choice of facility, on average results in inferior care, and requires you to surrender all income to the government.
- Option B: Use private LTC. Pay \$50,000 for private LTC. You would only leave \$150,000 as a bequest but would have your choice of facility and would have your income available for spending as you wish during that year (unspent income would be forfeited).
 - a. Which of these two options would you choose? [A or B] **{QT-SS}**
Option A
Option B
 - b. In the same scenario, what is the most of your total of \$200,000 that you would be willing pay to get privately funded as opposed to Medicaid Long Term Care (knowing that all such spending will come out of the bequest you leave)?
[Programmer: for this question display the usual range prompt – Please enter the number in the range of 0-\$200,000.] numeric OE

Your Household's Pattern of Spending

21. Which of the following ranges reflect the total amount of money your household spent on all categories of goods and services in 2005? Include everything you paid for by writing checks, using credit cards, or using cash out of pocket (including mortgage payments, rent, taxes, out of pocket medical expenses, insurance premiums, purchases of major durable goods such as cars, furniture, electrical equipment, heating bills, gas, food at home, food away from home, travel and entertainment, education, personal services, etc.). **Please do NOT include additions to your savings or the purchase of investments or real estate as an "expense".** {QT-SS}

- \$0-\$9,999
- \$10,000-19,999
- \$20,000-29,999
- \$30,000-39,999
- \$40,000-49,999
- \$50,000-74,999
- \$75,000-99,999
- \$100,000+

[Insert a box to enter numbers and ask below:]

- a. Please enter your best estimate (in dollars). {numeric OE} lv-1 hv-9999999

[Note: All of Q22 on same page.

Start with a zero in each box. Sum up 1-5 at the bottom of the table and display a running total as the boxes are changed.

When they press "next"

First, do not allow #5 to be zero. If it is zero, display "Please enter a positive amount in the "other living expenses" row in the table."

Then, if the final calculated total isn't in the range given earlier, give them an error -- "Your estimated total spending is does not fall into the range you indicated earlier. Please adjust the itemized estimates you have provided."]

You said your total spending was between [pipe in Q21] in total last year. In the boxes below, please do the best you can to categorize your expenses:

Range for all open end lv-0 hv-9999999

22. Please provide your best estimates (in dollars) of the following expenditures in year 2005.

- a. All mortgage and debt payments (mortgage, car loan, home equity line, etc.), **except credit card payments.**

{Open Numeric}

- b. Maintenance, improvement, and taxes on real estate you own, or any **rent** that you pay

{Open Numeric}

- c. Purchases of major durable goods such as cars, boats, electrical equipment and computers, furniture, etc.

{Open Numeric}

- d. All **out of pocket** healthcare expenses.

{Open Numeric}

- e. Income or other taxes you pay, other than real estate taxes:

{Please include in spreadsheet -- Open numeric, include in total}

f. All other living expenses. This includes food at home, food away from home, travel and entertainment, clothing, recurring transportation expenses, insurance premiums, telephone and other utilities, financial services, advisory or accounting fees, legal services, education, other personal services (haircuts, gardening, housekeeping), etc.

{Open Numeric} -

21b.

Looking forward to the year 2010, **and assuming that the prices of the things that you buy are the same as the prices for those same things in 2005**, would you expect the total amount you spend to be higher, lower, or the same as in 2005?

Higher

Lower

Same

- C. [If Higher]** Again assuming that all prices are fixed at 2005 levels, what would be the average annual **increase** in your spending over the next five years? **[Drop down menu in % from 1% up to 10%, then more than 10%.**
- D. [If Lower]** Again assuming that all prices are fixed at 2005 levels, what would you expect to be the average annual **decrease** in your spending over the next five years? **[Drop down menu [in % from 1% up to 10%, then more than 10%.**

23. Looking forward to 2010, and assuming that the prices of the things that you buy are the same as the prices for those same things in 2005, would you expect your household's **out of pocket healthcare spending to be higher, lower, or the same as in 2005?** {QT-SS}

Higher

Lower

Same

[If they answer "higher", the % range shown should be all positive (0%, 1%,2%.....10%,more than 10%)

If they answer "same", the follow-up question is skipped

If they answer "lower". the % range shown should be all negative] (less than -10%, -9%,-8%.....-1%,more than -1%)

- a. **[If Higher or Lower]** Again assuming that all prices are fixed at 2005 levels, what do you expect to be the annual average percentage change in the amount of your **out of pocket healthcare spending** over the next five years? **[Drop down]**

24. Looking forward to 2010, and assuming that the prices of the things that you buy are the same as the prices for those same things in 2005, would you expect spending on **other living expenses** to be higher, lower, or the same as in 2005? {QT-SS}

Higher

Lower

Same

[If they answer "higher", the % range shown should be all positive (0%, 1%,2%.....10%,more than 10%)

If they answer "same", the follow-up question is skipped

If they answer "lower". the % range shown should be all negative] (less than -10%, -9%,-8%.....-1%,more than -1%)

- a. **[If Higher or Lower]** Again assuming that all prices are fixed at 2005 levels, what do you expect to be the annual average percentage change in the **amount of your spending on other living expenses** over the next five years? **[Drop down]**

25. Finally, looking forward to 2010, and now **without** making the assumption that prices will necessarily remain fixed, please tell us if you expect **your total spending in dollars on other living expenses** to be higher, lower, or the same as in 2005? **{QT-SS}**

Higher

Lower

Same

[If they answer "higher", the % range shown should be all positive (0%, 1%,2%.....10%,more than 10%)

If they answer "same", the follow-up question is skipped

If they answer "lower". the % range shown should be all negative] (less than -10%, -9%,-8%.....-1%,more than -1%)

- a. **[If Higher or Lower]** What do you expect to be the annual average percentage change, including the effect of any price changes that might occur, in the amount you spend on other living expenses over the next five years? **[Drop down]**

26. Do you have any comments on this survey? (Open end text). Do not force an answer....