The Costs and Consequences of Perceived Political Uncertainty in Social Security

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Abstract

Households approaching retirement face political uncertainty in their retirement opportunities due to the long-term actuarial deficit in the Social Security program. We field an original internet survey to analyze the impact of this uncertainty on household welfare and behavior. On average, our survey respondents expect only about 60 percent of the benefits they are supposed to get under current law. We document the wide variation around the expectation for most respondents and the heterogeneity in the perceived distributions of future benefits across respondents. This uncertainty has real costs. Our central estimates show that on average households would be willing to forego 4 – 6 percent of the benefits they are supposed to get under current law to remove the political uncertainty associated with their future benefits. However, responses to hypothetical questions about behavior in the absence of political uncertainty do not suggest that respondents are engaged in precautionary behavior due to the uncertainty.

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1. Introduction

Most people probably realize that to address the solvency of Social Security, some combination of benefit cuts and tax increases will likely occur at some point in the future.[1] The need for reform to restore the program to long-term financial stability has been an active topic of policy discussion since at least the report of the 1994-1996 Advisory Council (Advisory Council, 1997). Since then, each of the last three presidents has made the reform of Social Security an important part of his policy agenda.[2] With the status of reform still in doubt, individuals can expect something to happen but not be certain of the timing, size, and composition of the policy change. At this point, little is known about the degree of uncertainty that individuals have concerning eventual reform, but these expectations are fundamental to understanding the welfare loss associated with political uncertainty and the behavioral responses that individuals are making in light of it. In this paper, we remediate this lack of knowledge by fielding an original, internet-based survey that asks individuals about their perception of the political uncertainty in Social Security benefits and taxes, as well as their behavioral responses to the uncertainty they perceive.

To illustrate the role of political uncertainty in a stylized example, consider two scenarios. In the first, individuals know for sure that their Social Security benefit will be cut by 20 percent. In the second, they have a 20 percent chance that their benefits will be cut completely and an 80 percent chance that their benefits will not be cut at all. While the expected benefits (and thus the expected cost to the government) are the same in both scenarios, individuals only face political uncertainty in the second scenario. Because of the uncertainty in the second scenario, risk averse individuals value their benefits less than what they cost in expectation. In particular, they would likely be willing to trade the second scenario for a sure benefit cut, even if that sure benefit cut is somewhat greater than 20 percent. By measuring the

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[1] In their most recent report, Social Security's Board of Trustees (2011) projected that the program's trust funds would be exhausted in 2036, at which point annual costs are projected to exceed annual income by 28 percent or 3.8 percentage points of taxable payroll. In a survey of Social Security benefit-rule changes in leading developed economies, McHale (2001) found that projections of rising costs under current rules have led to reforms in some countries that had a major impact on the present discounted value of promised benefits for middle-aged and younger workers.

[2] The Social Security Administration keeps an archive of presidential statements on Social Security at http://www.ssa.gov/history/presstmts.html. President Bush spent much of 2005 advocating for reform, and the need for reform figured prominently in President Obama's call for a bipartisan fiscal commission in 2010 and negotiations over the debt ceiling increase in the summer of 2011.

difference between the expected benefit cut and the largest sure benefit cut people would be willing to accept, we are able to estimate the cost of political uncertainty to individuals.

Individuals can mitigate the cost and consequences of uncertainty by changing their behavior. For example, in the second scenario, they may save more so that they will have at least some other source of income in the off-chance that Social Security benefits are cut completely. In our survey, we ask about a wide range of retirement planning activities that individuals currently undertake and about how these behaviors would be different if their Social Security benefits and taxes were contractually guaranteed at a predetermined level. From these questions, we infer how people react to the uncertainty they perceive.

This paper bridges two distinct literatures. The first elicits information from individuals and households on their expectations of future Social Security benefits and some behavioral responses. An early example focusing on the relationship between Social Security and private saving is Bernheim and Levin (1989). More recent examples include Dominitz, Manski, and Heinz (2003), Gustman and Steinmeier (2005), van der Wiel (2008), and Liebman and Luttmer (2008). The second literature concerns policy uncertainty and its impact on welfare and behavior. The earliest studies focused on tax policy uncertainty.[3] Later studies began to incorporate specific uncertainty regarding Social Security benefits. For example, Giavazzi and McMahon (2008) examined saving and labor supply responses to uncertainty in German pension entitlements surrounding elections in the late 1990s. Gomes, Kotlikoff, and Viceira (2007) used a calibrated life-cycle model to show that the excess burden from policy uncertainty regarding Social Security could reach 0.6 percent of all economic resources.

Our paper extends the first literature by eliciting information on not just policy expectations but the uncertainty around those expectations. It extends the second literature by anchoring the analysis of policy uncertainty to the perceptions held by a representative sample of individuals. Specifically, we field a survey of 3,000 individuals between the ages 25 and 59 through the firm Knowledge Networks. We focus on this age range because this is the prime age range in which individuals need to prepare for retirement and because older individuals will likely be (largely) grandfathered into the existing rules if there is a major Social Security reform. The responses to this survey enable us to better understand individuals' perceptions of the

[3] See, for example, Alm (1988), Skinner (1988), and Kim, Snow, and Warren (1995).

political uncertainty in Social Security benefits and taxes, as well as their behavioral responses to the perceived uncertainty.

In the survey, questions about future benefits are asked relative to the benefits scheduled under current law. The key part of the survey consists of two sets of questions about these benefits. In the first, respondents are asked to describe the likelihood of receiving benefits in specific ranges relative to "the benefits they are supposed to get under current law." They fill in a histogram of this distribution by putting balls into bins on their computer screens. In the second part, respondents are asked to make a sequence of choices as to whether they would prefer a guaranteed contract at a hypothetical percentage of the benefits they are supposed to get under current law to the distribution of benefits they are expecting. This sequence of questions allows us to bracket their certainty equivalent benefit level. Subtracting the certainty equivalent from the mean of the distribution yields the respondent's risk premium against political uncertainty, which is the focus of our study.

Our main results indicate both that individuals perceive the risk to which political uncertainty exposes them and that the welfare costs of that risk are statistically and economically significant. Across respondents, the average expected benefits are 59.4 percent of the benefits the respondents are supposed to get under current law and the average standard deviation is 22.5 percent. The average certainty equivalent is 53.7 percent, yielding an average risk premium of 5.8 percent. For the 75 percent of the sample that report positive risk premia, the distribution of those premia generally lie between the distributions that would be generated by populations having coefficients of relative risk aversion between 3 and 5. Multiple regression analysis shows that the risk premium increases with age and decreases with income. Adjustments to allow for possible errors in the bracketing of the certainty equivalent lower the average risk premium only to 4 percent. Our results for behavioral responses to political uncertainty do not suggest that individuals are undertaking precautionary behavior against this risk. To the contrary, in response to hypothetical questions about how they would change behavior if their benefits could be guaranteed, more respondents report that they would work and save more than working and saving less.

The remainder of the paper is organized as follows. In section 2, we describe our sampling frame and survey instrument and provide summary statistics for the demographic and other control variables used in our analysis. In section 3, we discuss the particular design

features of the survey that enable us to elicit information on the distribution of future benefits and its certainty equivalent. We present our main results and sensitivity tests in Section 4. Section 5 provides evidence on the validity of survey responses to questions about benefit distributions. Section 6 considers possible adjustments that could be made to the distribution of risk premia. We discuss perceptions of political uncertainty in tax policy in Section 7 and the impact of political uncertainty on behavior in Section 8. Section 9 briefly concludes.

2. Data

Our survey is conducted as a module of the KnowledgePanel, created by Knowledge Networks. The KnowledgePanel is an address-based sample drawn from the U.S. Postal Service's Delivery Sequence File.[4] When households without internet access are recruited, they are provided with a laptop computer and free Internet service so they may participate in the panel. The KnowledgePanel consists of about 50,000 participants over the age of 18 and includes persons living in cell phone only households. Knowledge Networks collects basic demographic characteristics for all its panelists, and its panelists are roughly representative of the adult U.S. population according to these characteristics. Active members of the panel are invited to take specific surveys, with subsamples drawn using probability weighted sampling methods. The burden of panel membership is kept low by having members selected for no more than one survey per week.

We contracted with Knowledge Networks to obtain survey responses from approximately 3,000 KnowledgePanel participants who were between the ages of 25 and 59 in June 2011. Our sample contains the results for 3,053 completed interviews conducted between June 10 and July 1, 2011. The median duration of the interview was 20 minutes and we paid respondents a $5 cash-equivalent incentive to enhance survey completion. Table 1 contains summary statistics on the demographic and other control variables that we use in our empirical analysis.[5] Appendix

[4] As discussed in Knowledge Networks (2010), randomly sampled addresses are invited to join the KnowledgePanel through a series of mailings (English and Spanish materials) and by telephone follow-up to non-responders when a telephone number can be matched to the sampled address. Invited households can join the panel by one of several means: completing and mailing back an acceptance form in a postage-paid envelope; calling a toll-free hotline staffed by bilingual recruitment agents; or going to a dedicated Knowledge Networks recruitment Web site and completing the recruitment information online.

[5] We defer the discussion of the first four rows, which summarize the distribution of perceived Social Security benefits, until Section 4 below.

Table A1 compares these summary statistics for these and other demographic variables to the Current Population Survey from March 2010.

Along these dimensions, the two samples are broadly similar. The key differences are as follows. Our sample has fewer respondents between the ages of 25 and 34 and more respondents between the ages of 50 and 59. Our sample is 46.4 percent female, to 50.7 percent in the CPS. Our sample is 15.4 percent Hispanic, matching the CPS, but has 4.5 percentage points more White respondents and correspondingly fewer Black and Other Race respondents. Compared to the CPS, our sample contains about 8 percentage points more respondents with a bachelor's degree or higher and lower representation of respondents with lower education levels. The distributions of income are not significantly different – none of the five categories shown in Appendix Table A1 have proportions different at the 5 percent significance level. The fraction of our sample that is married is 64.3 percent, about 3 percentage points higher than in the CPS. The other categories are not directly comparable, as the Knowledge Networks panel allows for a response, "Living with Partner," which is not present in the CPS. Our sample has slightly higher representation of respondents from the Midwest and lower representation of respondents from households with more than two persons.

In our regression analyses, we control for these demographic factors, along with MSA residency, homeownership, and employment status, as shown in Table 1. We also include a set of other control variables that are relevant to perceptions of political uncertainty in general and the Social Security program in particular.[6] We ask about risk preferences, life expectancy, the importance of Social Security in retirement, optimism, trust in the political system, and financial literacy. Summary statistics are presented in the last six rows of Table 1.

We measure risk preference through a sequence of questions in which respondents can choose a job that offers a certain lifetime income or a job that offers varying degrees of risk, such as a 50-50 chance of doubling lifetime income and a 50-50 chance of reducing it by some percentage. The sequence varies the reduction to bracket the respondent's point of indifference, from which we can infer risk aversion. In a constant relative risk aversion scenario, the brackets

[6] We ask these questions at the end of the survey. The full survey instrument is included as Appendix B. As these control variables are not the focus of our analysis, we create a dummy variable for whether the response is missing, recode the missing values to zero, and then include both the recoded variable and the dummy for whether the response was originally missing in our regressions.

are coefficients of less than 1, 1 – 2, 2 – 4, 4 – 8, and greater than 8. The median response is consistent with risk aversion of 4 -8.

Two factors are very important to the role of Social Security in retirement. The first is how long the beneficiary will live. We ask respondents for a subjective probability of surviving to age 75. The mean probability is 67.9 and the median is 71. A quarter of the sample places the probability at 51 percent or below and another quarter at 85 percent or higher. The second is how important Social Security will be as a share of retirement income. We ask this question directly, with possible responses, coded 1 – 4, in the form of ranges of less than 25 percent of spending, 25 – 50 percent, 50 – 75 percent, and greater than 75 percent. There is considerable variation around a mean of 2.8 and a median of 3 (50 – 75 percent).

To measure optimism, we ask six questions about how the respondent perceives the outcomes of uncertain events (e.g., "In uncertain times, I usually expect the best.") The respondent can pick from five choices – strongly disagree, somewhat disagree, neither agree or disagree, somewhat agree, strongly agree – which are given numerical values of 1 – 5, with higher values indicating more optimism. We average these numerical responses and standardize the variable to have zero mean and unit standard deviation.

Trust in the political system is measured as the response to the statement, "Most elected officials are trustworthy." As with the optimism question, the five choices range from strongly disagree to strongly agree, with numerical values ranging from 1 – 5. The average response is 2.2 and the median response is 2.0, indicating that most respondents lack trust in the political system.

Finally, we measure financial literacy as the number of correct answers given by the respondent to four simple questions about a lottery, money illusion, compound interest, and mutual funds. The average score is 2.4, with a median of 3.

3. Methodology

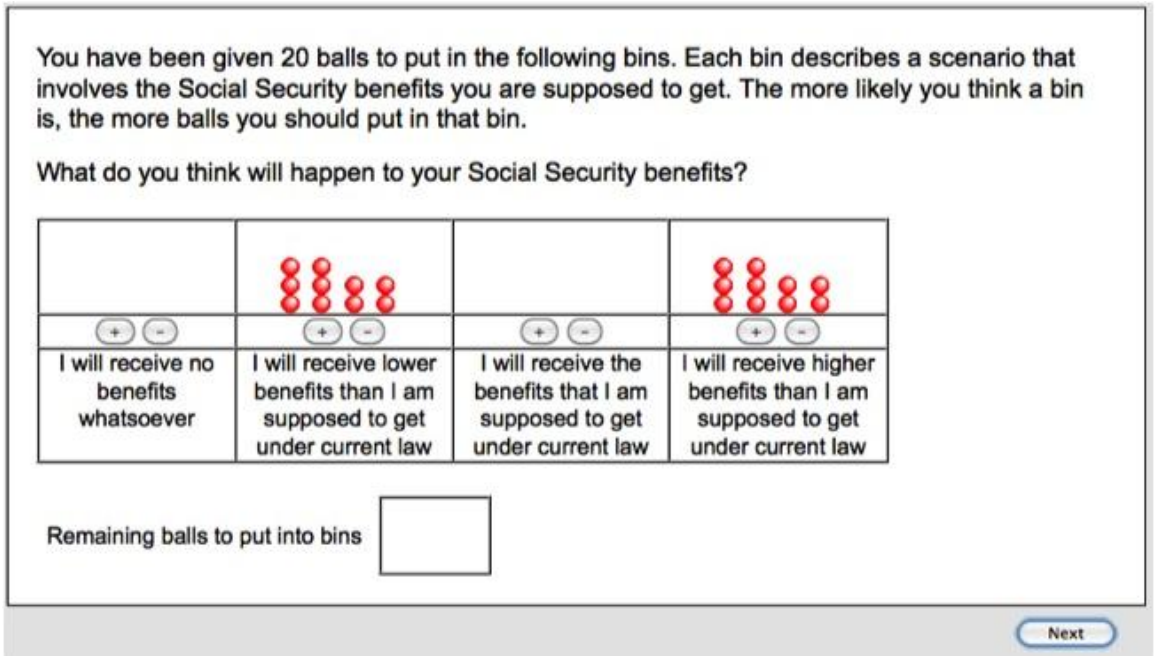
The main part of our survey is designed to gather information from the respondents sufficient to calculate the costs of political uncertainty. As this is not an everyday topic of conversation for most people, the survey itself needs to guide them through the steps of the process. This section discusses and illustrates three important design features of the survey.

3.1 Choice of Baseline Benefits

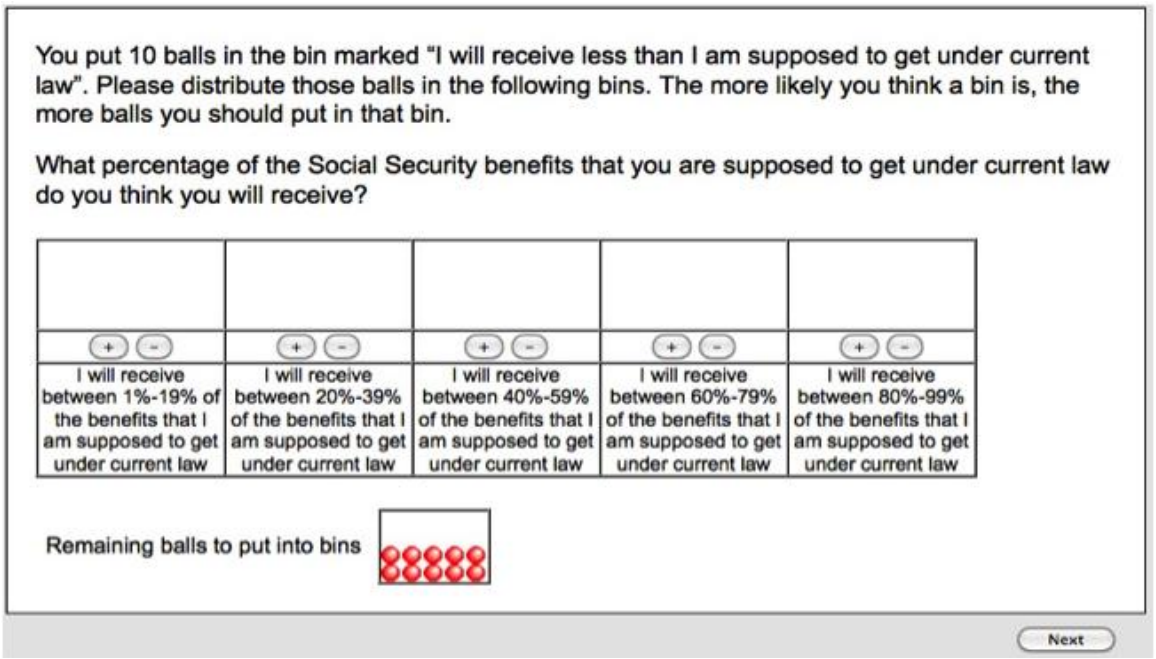
The first feature is to use the respondent's own perception of current law benefits as the baseline. Throughout the survey, respondents are asked to compare expected or hypothetical benefits to "the benefits you are supposed to get under current law." The survey is not primarily interested in whether the respondent has an accurate projection of what those current law benefits would be. By keeping whatever misconceptions respondents may have about current law benefits in the baseline, the survey responses will pertain only to the political uncertainty regarding how current law benefits will be changed by policy makers.

3.2 Constructing the Perceived Distribution of Social Security Benefits

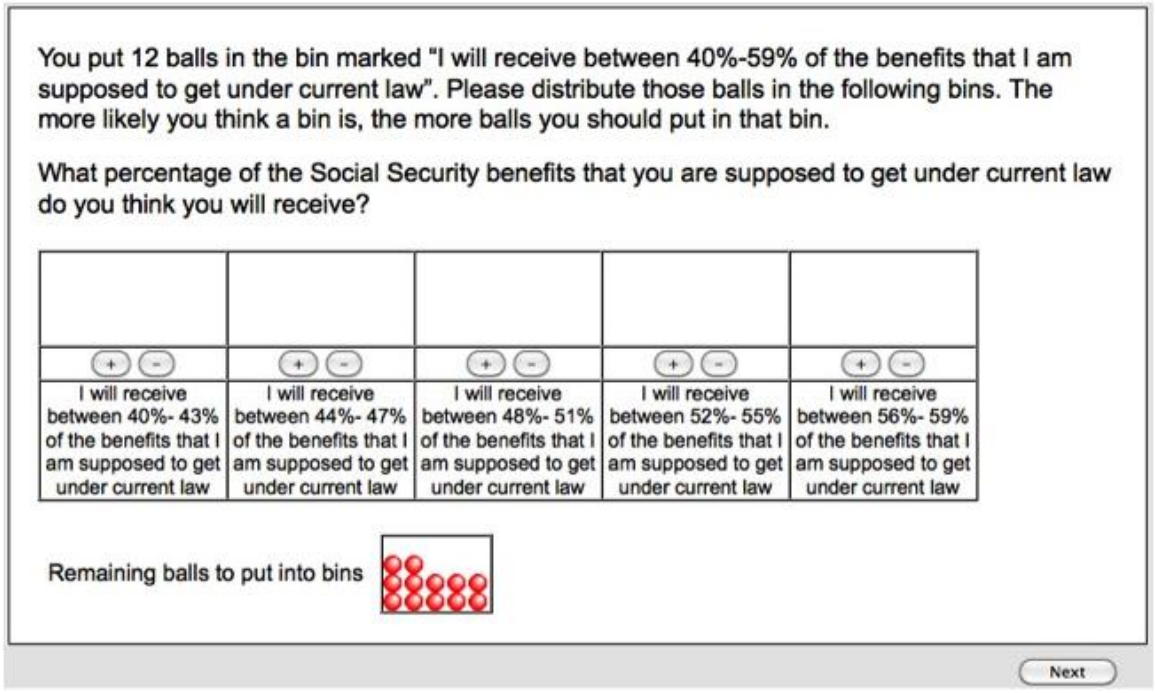
The second feature is to use the visual aspect of the online survey to facilitate the answer to the general question of how uncertain the respondent believes future Social Security benefits to be. This uncertainty will be collected in the form of a histogram of where the respondents believe their benefits will be and allow us to estimate the cumulative distribution function (CDF) of benefits for each respondent as a percent of what he or she is supposed to get under current law. The survey first asks the respondent to allocate 20 balls across four bins reflecting different benefit amounts, where each ball is explained to represent a 1 in 20 chance of that benefit amount occurring. One category is the "no benefits whatsoever." The other three categories are lower, the same, and higher benefits relative to the benefits that the respondent is supposed to get under current law. An example of what the survey screen might look like when the respondent has allocated the 20 balls to the 4 bins is:



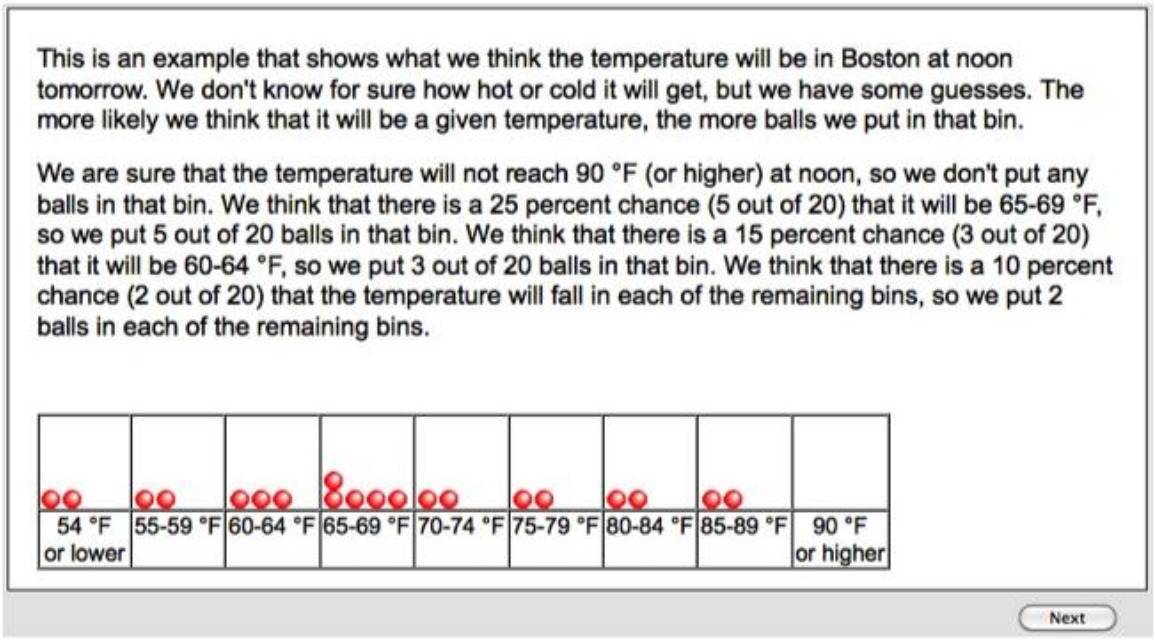
Respondents who put any of these balls in the "lower" or "higher" bins are then asked to further specify which 20-percentage-point bins between 1 and 99% or 101 and 200% should contain these balls. An example of the next screen this respondent will see is:



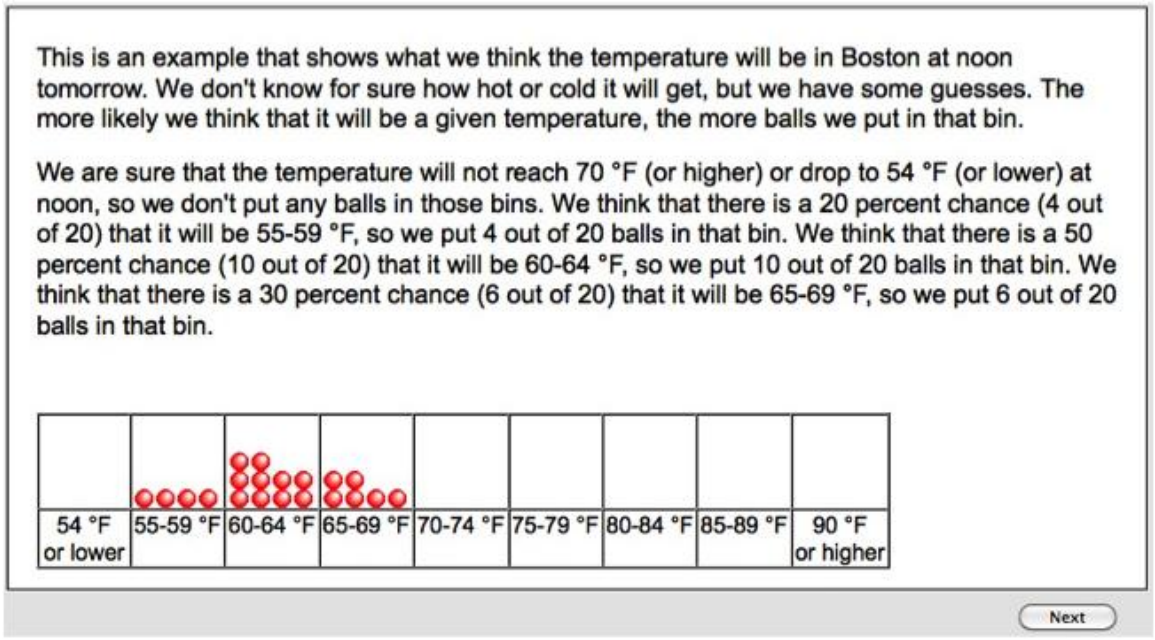
Finally, any bin into which 11 or more balls are placed is further broken down into five smaller bins, and respondents are asked to allocate the balls from the larger bin into the smaller bins. An example of the screen that the respondent would have seen in that case is:



By this three-step process, we obtain the CDF of expected future benefits for each respondent. In order to have greater confidence that respondents will know how to use this tool to express their preferences, we first give an illustration using the weather in Boston. Recognizing that the shape of the distribution that we show them to illustrate the method might influence the way they fill in the distribution of perceived benefits, we choose two different illustrations and assign them to respondents at random. For example, the wide distribution is:



And the narrow distribution is:



If we had shown no illustration, we could not be sure that respondents would understand the tool well enough to answer the subsequent question. If we had only shown one illustration, then we would have had no way to gauge the size of any bias that our particular choice of illustration may have had on the subsequent question. By choosing two illustrations, we can estimate the impact of the characteristics of the illustration – wide or narrow – on the responses to the subsequent question.

3.3 Obtaining the Certainty Equivalent Benefit

The natural metric to quantify just how much the uncertainty in the perceived distribution of Social Security benefits matters to respondents is how much they would pay to insure themselves against it. Even in a more straightforward context, respondents could be expected to have trouble coming up with a sensible answer if we asked for it directly. This concern leads us to the third important feature of our survey, which is the sequence of binary choices that the survey presents to the respondent that allow us to bracket the respondent's certainty equivalent to the perceived distribution of benefits described in Section 3.2. The survey calculates the expected value of the distribution each respondent constructed by putting balls into bins (X% below) and presents the respondent with the following choice:

> The way you put balls into various bins shows that you expect to receive **X%** of the Social Security benefits you are supposed to get under current law. It also shows that you could receive more or less than this **X%**. Let's call this distribution of possible benefits, as described by you using the bins and balls, your "uncertain benefits." So, your uncertain benefits are whatever level of benefits you get when you claim benefits.
>
> Imagine a contract that instead guarantees you a certain percentage of the Social Security benefits you are supposed to get under current law. This is like having all 20 balls on this certain percentage. This contract is unbreakable and cannot be changed by anybody, even the United States government.
>
> Would you rather have:
>
> (1) Guaranteed benefits equal to **Y%** of the Social Security benefits you are supposed to get under current law
>
> (2) Uncertain benefits around **X%** of the Social Security benefits you are supposed to get under current law

Respondents are prompted with a starting value of Y_1 equal to 30 or 70, chosen randomly, so that we can assess the impact of the starting value on the ultimate results. (Whether the guaranteed benefits are the first or second choice is also randomized, for the same reason.) A respondent who chooses the guaranteed (uncertain) benefits at a given Y_1 is then offered a lower (higher) value of Y_2 and asked the same question. The questioning continues, with the differences between Y_n and Y_{n+1} narrowing, until the respondent has answered that he would take the uncertain benefits if offered the lower of Y_n and Y_m, and the guaranteed benefits if offered the higher of them, where the interval between them is 5.[7]

One problem in generating the certainty equivalent using the question above is that some respondents provide distributions that show no uncertainty. For these respondents, we ask a slightly different version of the question:

> Imagine that you were offered a contract that guaranteed you a certain percent of the Social Security benefits you are supposed to get under current law. This contract is unbreakable and cannot be changed by anybody, even the United States government.
>
> Would you rather have:

[7] The full sequence of offers that the respondents receive is shown in Question 4.3 of the survey instrument in Appendix B.

(1) Benefits as determined by an unbreakable contract that offers you **Y**% of the Social Security benefits you are supposed to get under current law

(2) Benefits as determined by Social Security when you claim benefits

The sequencing of the offers of Y% is the same as in the alternative question. This question simply makes no mention of a distribution that shows no uncertainty.

The answers to these questions provide us with upper and lower bounds on a certainty equivalent to the distribution of possible Social Security benefits. Subtracting this certainty equivalent from the distribution's expected value would yield the risk premium that the respondent would pay to insure against the policy uncertainty in Social Security. In order to make more precise estimates of this risk premium, we ask a follow-up question of respondents whose range for the certainty equivalent is close to the expected value of their distribution of benefits. Specifically, a respondent whose upper bound for the certainty equivalent is within 5 percentage points of the expected value will be asked the question again, with a value of **Y** close to **X** that will ensure that the interval containing the risk premium is no larger than 4, and thus the value of the risk premium constructed by averaging the upper and lower bounds will be correct to within 2 percentage points. By construction, we will also be able to determine whether the risk premium is greater than or less than 2 percent.

4. Results

4.1 General Expectations about Social Security

The survey begins by soliciting respondents' views on the financial condition of the Social Security program. Table 2 aggregates the responses to these general questions. About 91 percent of respondents are aware that Social Security faces a projected financial shortfall. When asked how confident they are that Social Security will be able to provide them with the benefits they are supposed to get under current law, only 3.3 percent were very confident, with another 22.3 percent somewhat confident. Thus, only a quarter expressed any confidence in the program's finances, while 45 percent are not too confident and 29 percent are not at all confident.

The wording of our question about confidence in Social Security matches that of Greenwald et al. (2010), who conducted a nationally representative, random-digit telephone survey. Appendix Table A2 provides comparisons of the responses to this question in our sample and the subsample of their respondents age 25 – 59.[8] In their sample, 10.5 percent were very confident and 34.0 percent were somewhat confident. Together, about 45 percent express confidence in Social Security in the Greenwald et al. sample, compared to 25 percent in the Knowledge Networks panel. Of the remaining 55 percent, 36.3 percent are not too confident and 19.2 percent are not at all confident. Thus, our sample respondents show less confidence than those in the Greenwald et al. sample. In both samples, confidence tends to rise with age and is similar across men and women.

The survey then asks respondents how they expect the projected shortfall will be closed. As shown in Table 2, more than half, about 58 percent, expect the shortfall to be addressed by a combination of tax increases and benefit reductions. Nearly a quarter believe the shortfall will be addressed mostly or entirely through tax increases, while 18 percent believe the shortfall will be addressed mostly or entirely through benefit cuts. We focus on benefit cuts in the next several tables and report the results of analogous questions about tax increases in Table 6 below.

When asked about the chance that the general level of benefits (as distinct from the benefits they expect to get individually) will decline over the next decade, the mean and median probabilities shown are 61 percent. The same question asked about a decline by the time the respondent reaches age 65 yields mean and median probabilities of 66.6 and 71 percent, respectively. This pessimism regarding future benefits is also reflected in expected benefit levels. Compared to the benefits they are supposed to get under current law, only 3 percent of respondents expect to get greater benefits, with 24 percent expecting the same benefits and 73 percent expecting lower benefits. When respondents are asked for their expected benefits relative to what they are supposed to get under current law, the mean and median responses are 65.9 and 70 percent, respectively.

4.2 The Perceived Distribution of Future Benefits

[8] We are indebted to Matthew Greenwald for providing these tabulations. The tabulations of the Knowledge Networks panel in Table A2 pertain to the respondents who answered both the ball/bins questions and the certainty equivalent questions, as described in Section 3 above.

The responses to the general questions presented in Table 2 show that households by and large expect to not receive all of the benefits they are supposed to get under current law. By themselves, they do not indicate whether households face uncertainty about the benefits they will get. Respondents could have a firm belief that they will receive, say, 70 percent of their current-law benefits, no more and no less.

Figure 1 graphs the aggregate CDF of all respondents to the survey. Looking at the probability mass at 0 and 100 percent, in aggregate, respondents perceive about a one in six chance of receiving no benefits whatsoever and about a one in four chance of receiving exactly the benefits they are supposed to get under current law. The perceived probability of outcomes strictly above current-law benefits is less than four percent. The remaining 54 percent of the probability mass lies strictly between 0 and 100, with an overall median at 69.5 percent.

The aggregate CDF shown in Figure 1 incorporates both the variation in possible outcomes within individual respondents' CDFs and the variation across respondents' CDFs. Figures 2 and 3 demonstrate that both sources of variation are important. Figure 2 shows the CDF of the mean perceived benefit across respondents. There is very little probability mass at zero, at 100 percent, or above 100 percent. Almost all of the respondents have mean perceived benefits between 0 and 100 percent of the benefits they are supposed to get under current law. The graph shows wide variation across respondents, with summary statistics provided in the first row of Table 1. The 25^{th} and 75^{th} percentiles are 37.1 and 83.4 percent, respectively.

We can use two other questions that we asked about the expectations of future benefits to assess the validity of the subjective probability distribution using our ball/bin question. In the first, we compute the correlation of the mean of the subjective distribution with the straightforward multiple-choice question about confidence in Social Security that we presented in Panel A of Table 2. This correlation is 0.54, indicating that those with more confidence tended to construct distributions with higher expected benefits. In the second, we compute the correlation of the mean of the subjective distribution with the point estimate of future benefits as a fraction of benefits under current law that we presented in Panel F of Table 2. This correlation is 0.69, and like the first, is highly statistically significant.

We use the expectation of the subjective probability distribution of future Social Security benefits, rather the point estimate, as our baseline measure of expected future benefits, for two reasons. First, we are not sure whether the point estimate offered by respondents is an

expectation, a median, or a mode, whereas by construction the expectation of subjective benefits is an expectation. Second, the expectation of subjective benefits better predicts confidence in Social Security (as measured by the multiple-choice question) than the point estimate is able to predict confidence in Social Security. This suggests that the subjective expectation has less measurement error than the point estimate.

Figure 3 shows CDF of the standard deviations of respondent CDFs. Only 7.5 percent have a standard deviation of zero. The second row of Table 2 provides summary statistics, indicating mean and median values of about 23 percent, with a quarter of the standard deviations at 33 percent or higher. These figures and statistics show that respondents perceive uncertainty in the possible benefits they will receive from Social Security and that the perceived distribution of possible benefits varies across respondents.

4.3 The Certainty Equivalent Social Security Benefit

It could be that respondents perceive an uncertain distribution of future benefits but that due to risk-neutrality or indifference, the uncertainty has little impact on their welfare. As a first measure of the importance of uncertain benefits, the survey asks, "How much does it matter to you that you do not know exactly how much you will get in Social Security benefits?" Panel G of Table 2 reports the results. Only 20.5 percent respond that the uncertainty matters little or does not matter, compared to 32 percent who respond that it matters somewhat and 47.5 percent who respond that it matters very much.

Figure 4 shows the distributions of the upper and lower bounds for the certainty equivalents across respondents. We compute the certainty equivalent as the midpoint of the interval between them. Summary statistics for the certainty equivalents are shown in the third row of Table 1, denominated as a percentage of the benefits the respondents are supposed to get under current law. The mean certainty equivalent is 53.7 percent and the median is 57.5 percent. About a quarter of respondents have a certainty equivalent of 32.5 percent or below, while a quarter have a certainty equivalent of 76.5 percent or above.

4.4 Risk Premia for Political Uncertainty

With the responses for the expected benefit from the distribution and for the certainty equivalent from the sequence of choices between guaranteed and uncertain benefits, we can

subtract the average of the upper and lower bounds shown in Figure 4 from the expected value of benefits to obtain the risk premia that respondents would pay in the form of lower benefits to avoid the political uncertainty surrounding Social Security.

Summary statistics for the distribution of risk premia are shown in the fourth row of Table 1. The mean risk premium is 5.8 percent and the median risk premium is 7.0 percent. About 25 percent of respondents have a risk premium of zero or less – there is no requirement imposed on their responses that the certainty equivalent obtained through the sequence of choices of guaranteed versus uncertain benefits yields a certainty equivalent below the expected value. About 11 percent of respondents have risk premia less than negative 20 percent. At the other end of the distribution, 25 percent of respondents have risk premia of 16.5 percent or more, with 4 percent having risk premia in excess of 50 percent.

Recall from Section 3.2 that there are some respondents who have missing benefit expectations or distributions that have no uncertainty who are asked an alternative version of the certainty equivalence questions. Figure 5 graphs the distribution of risk premia, with and without this subset of respondents who were asked the alternative question. The dark (blue) curve includes all respondents, and the light (yellow) curve includes only those respondents who were asked the first version of the certainty equivalent questions. The differences between the curves are slight. It is not surprising that excluding the respondents who perceived no uncertainty shifts the curve to the right – this group perceives less uncertainty and thus should have lower risk premia. Given this similarity, we use the full sample of respondents in the analyses below.

The distribution of risk premia derived from the respondents' self-reported certainty equivalents can be compared with distributions based on hypothetical values of risk aversion. For each respondent, we calculate the risk premium that would be implied by the self-reported distribution of possible Social Security benefits, assuming constant relative risk aversion preferences with coefficients of relative risk aversion equal to 1, 3, and 5.[9] These risk premia also incorporate the information from the variable that captures how important the respondent expects Social Security to be in financing retirement spending.[10]

[9] For an expected utility function u(w), relative risk aversion is given by the expression –u"(w)*w/u'(w). This expression is constant at a value of γ when $u(w) = C^{1-\gamma}/(1-\gamma)$ for $\gamma > 1$ and $u(w) = \ln(w)$ for $\gamma = 1$.

[10] Specifically, suppose that the respondent's Social Security benefits will be 100. Recall that the four responses to the survey question for the importance of Social Security are less than 25 percent, 25 – 50 percent, 50 – 75 percent,

By construction, these distributions cannot have negative risk premia and will have a zero premium for any respondent who did not indicate variation in the self-reported distribution. Figure 6 shows the CDFs for the risk premia calculated in this manner, along with the CDF from Figure 5 based on self-reported certainty equivalents. The graph shows that for the 75 percent of respondents who reported positive risk premia, the CDF of those risk premia is intermediate between the hypothetical CDFs that would obtain if all respondents had coefficients of relative risk aversion between 3 and 5. This is a reasonable range for risk aversion.[11]

4.5 Correlates of the Perceived Distribution of Benefits

We next consider the empirical relationships between the characteristics of the perceived distribution of Social Security benefits and the demographic and other control variables included in the survey. The most important of these is the age of the respondent. Figure 7a shows the expected benefits with a 95% confidence interval for 5-year age groups in our sample. The overall pattern is that the expected benefits, as a share of what respondents believe they are supposed to get under current law, are an increasing function of age. This pattern is evident at ages above 40 and even more so above 50. The point estimates for the average expected benefits by age are 79.4 percent for those 55 – 59, 67.8 for those 50 – 54, 59.0 for those 45 – 49, and 56.0 for those 40 – 44. This positive relationship is reasonable – politicians frequently assert that any reforms would impose minimal effects on those "at or near retirement."

We consider age and other factors in a multivariate regression in Table 3. There are two pairs of regressions, the first using expected benefits as the dependent variable and the second using the standard deviation of benefits. Within each pair, the first column includes only the demographic variables from the Knowledge Networks panel and the second also includes the other control variables about preferences and beliefs that we ask in our survey. Focusing on the regression with all of the covariates, an additional year of age leads to a 0.94 percentage point increase in expected benefits and a decrease in the standard deviation of 0.21 percentage points. These estimates are statistically significant at the 1 percent level. They are consistent with

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and more than 75 percent. If Social Security financed 25 percent of spending, that would require other income of 300. For 50 and 75 percent, the other income would have to be 100 and 33, respectively. Thus, we can assign other income of 17, 67, and 200 for the 25 – 50, 50 – 75, and 75 – 100 intervals. For the interval that is 0 – 25, we choose a value of 500 (consistent with Social Security funding 17 percent).

[11] For a 50-50 chance of gaining or losing 25 percent of one's wealth, the risk premia are 3.2, 9.0, and 13.5 percent for coefficients of relative risk aversion of 1, 3, and 5, respectively.

political rhetoric on Social Security reform – the older people get, the less likely they are to get a benefit cut, and the less variable they will expect that cut to be.

Table 3 also shows that some demographic and other control variables have significant effects on the expected benefits and the standard deviation of benefits. The effect of being retired on expected benefits is large and significant – equivalent to the effect of 10 years of age. The point estimates for the effect on the standard deviation are negative but significant only at the 10 percent level. A 10 percent increase in income leads to a 0.32 percentage point decline in expected benefits and a 0.09 percentage point reduction in the standard deviation of benefits. This result is also consistent with political rhetoric surrounding Social Security reform, in which potential benefit cuts relative to current law are designed to be "progressive."[12] Race and education also matter – being Black or Hispanic or having less than a high school diploma all predict higher standard deviations. Black and Hispanic also predict higher expected benefits. Being female or having kids predicts lower expected benefits, equivalent to being about 3 or 6 years younger, respectively. Living in the Northeast has a positive effect on expected benefits, equivalent to 4 years of age. Among the other control variables, higher longevity, greater importance of Social Security to retirement spending, greater trust in the political system, greater optimism and higher financial literacy all predict higher expected benefits. Greater risk aversion and higher longevity predict lower standard deviations.

Figure 7b shows the analogous graph of average risk premia by 5-year age group, with a 95% confidence interval for 5-year age groups. There is a clear difference between those over 50 and those under 50. The former have risk premia of 9.9 and 11.7 percent in the 50-54 and 55-59 age groups, respectively. For the respondents under 50, risk premia are around 4 percent, with no statistically significant differences across age groups, though most are significantly different from zero.

In Table 4, we present two pairs regressions of risk premia on our demographic and other control variables. Within each pair, the first regression includes only the demographic variables while the second includes all demographic and control variables. In the first pair, the dependent variable is the risk premium calculated based on the certainty equivalent. In the second pair, the dependent variable is the risk premium calculated based on a simulated risk aversion coefficient of 3 and the response to the question about how important Social Security will be in financing

[12] See, for example, Mermin (2005).

retirement spending. The difference between the two measures is that the risk premium based on the certainty equivalent tells us not only about the characteristics of the perceived distribution of benefits but the respondent's subjective utility loss associated with the risk in that distribution. The simulated risk premium reflects only the characteristics of the distribution. If an effect appears in the latter but not the former, then it is a feature of the individual's reaction to the perceived distribution, not the perceived distribution itself.

For example, the effect of age is positive and significant on the risk premium calculated from the certainty equivalent. An additional decade of age increases the risk premium by 3 percentage points. But the effect is negative on the simulated risk premium, indicating that it is not the degree of uncertainty that varies by age but the extent to which a given amount of uncertainty affects the respondent's welfare. The effect of income is negative using either risk premium, but the point estimate is larger on the risk premium based on the certainty equivalent. Higher income respondents report less uncertain distributions and experience less of a welfare loss when uncertainty increases. A 10 percent increase income leads to a 0.19 percentage point reduction in the risk premium. Other significant effects on the risk premia include the positive effects of being retired (equal to 30 years of age), being Black or Hispanic, being more risk averse, having a higher chance of living to age 75, and having more trust in the political system.

5. Cross-validation of Responses

Recognizing that our survey asks questions that may be challenging for some respondents to answer, we incorporated a number of design features to enable us to determine how valid the answers to the key questions are. In Table 5, we present four such regressions. In Panel A, we construct a dummy variable for whether the respondent took the option of the guaranteed benefits (rather than the uncertain benefits) in the first round of questioning. Recall that the first offer of guaranteed benefits was randomized at either 30 or 70 percent of the benefits the respondent is supposed to get under current law. We also randomized whether the guaranteed benefits were listed as the first or second option. If respondents are making reasonable choices, then we would expect that the guaranteed benefits are more likely to be chosen when they are higher and that the results should be insensitive to whether the guaranteed benefits are the first or second choice. The regressions show this to be the case. Focusing on the second regression,

which includes the demographic and other controls from Tables 3 and 4, the respondent is 34 percentage points more likely to accept the guaranteed benefits when they are at 70 percent rather than 30 percent, an effect which is both large and statistically significant at the 1 percent level. The point estimate indicates that the respondent is 1.6 percentage points less likely to take the guaranteed benefits when they are the second choice, but the point estimate is not even as large as its standard error and thus statistically insignificant.

In Panel B of Table 5, we regress the respondent's certainty equivalent on three key variables that should predict it: the respondent's expected benefits, the respondent's perceived standard deviation of benefits, and the measure of the respondent's risk aversion derived from separate questions about hypothetical gambles described in Section 2. Recall that the expected benefits and standard deviation are derived solely from the distribution of benefits presented by the respondent before questions are asked about the certainty equivalent. All three coefficients have the predicted signs and are statistically significant at the 1 percent level. The regressions show that the a 1 percentage point increase in the expected benefits leads to a 0.47 percentage point increase in the certainty equivalent, while a 1 percentage point increase in the standard deviation reduces the certainty equivalent by 0.37 percentage point. An increase of 1 unit in the measure of risk aversion (e.g. from a coefficient between 1 – 2 to one between 2 – 4) reduces the certainty equivalent by 1.3 percentage points.

Panel C of Table 5 repeats the regression in Panel A using the final value of the certainty equivalent as the dependent variable. As in Panel A, the order in which the guaranteed benefits are presented has no statistically significant effect on the result. However, in this case, the starting value affects the certainty equivalent in a statistically significant way. The regressions show that if the respondent is first presented with guaranteed benefits of 70 percent rather than 30 percent, then the certainty equivalent that obtains from the sequence of questions is about 7 percentage points higher. This effect is statistically significant at the 1 percent level but should be zero – a fully rational respondent would give the same certainty equivalent regardless of the starting point. We explore possible explanations for this bias, along with one suggested correction, in Section 6 below.

In Panel D of Table 5, we consider the impact of the "weather" illustration of how to put balls into bins on the distribution of benefits reported by the respondent. The regressions indicate that respondents who are shown the wider distribution of temperatures subsequently

report distributions with more uncertainty. The dependent variable is the certainty equivalent of the distribution under a hypothetical (constant) coefficient of relative risk aversion of 3. A respondent shown the wider distribution has on average a certainty equivalent 3.5 percentage points lower than one shown the narrower distribution.[13] The distributions of the resulting risk premia, conditional on the wide versus narrow weather example, are graphed in Appendix Figure A1 and summarized in the bottom two panels of Appendix Table A4.

6. Possible Adjustments to Risk Premia

The estimates in Table 5 indicate that the starting value in the sequence of questions that determine the respondent's certainty equivalent has an effect on the resulting value. We consider two types of adjustment to the reported distributions that may account for a bias introduced by the starting value.

6.1 Linear Adjustment

The first type of adjustment is based on a simple linear model in which the reported value (R) of the certainty equivalent for respondent *i* is a weighted average of the respondent's true value (V) and the starting value (S):

$$R_i = (1-\beta)*V_i + \beta * S_i .$$

The parameter, β, can be interpreted either as a bias that affects all respondents uniformly or as a fraction of the population who give random answers to the questions and thus have a reported value close to the starting value. Given the linear model, and the fact that we varied the starting values across respondents, we can recover the average value of V_i by running the following regression:

$$R_i = \alpha + \beta * S_i + \varepsilon_i ,$$

[13] Regressions not shown indicate that there is a negative but insignificant effect on expected benefits and a positive and highly significant effect on the standard deviation of benefits. There is not, however, any statistically significant impact of the weather example on the certainty equivalent or the risk premium derived from it, so no further adjustments are required.

and computing the value of $\alpha/(1-\beta)$. We estimate this regression and obtain parameters of α = 44.72 (s.e. = 1.40) and β = 0.18 (s.e. = 0.03). Based on these coefficients for α and β, the average value of V_i is estimated to be 44.72/0.82 = 54.5 (s.e. = 0.63). Comparing this to the sample average value of the certainty equivalent of 53.7 shown in Table 1, the bias estimated to be 0.8 percentage points. This bias affects both the certainty equivalent and the risk premium equally, so a simple linear adjustment would lower the average risk premium from 5.8 to 5.0 percent.

6.2 Adjustment Assuming Partially Random Answering

The second type of adjustment is illustrated graphically by the three pairs of CDFs shown in Figure 8. Each pair has a common line style (dotted, dashed, or solid), with the curve on the left in each pair pertaining to a starting value of 30 and the curve on the right pertaining to a starting value of 70. The dotted curves are the CDFs of reported certainty equivalents. Our second adjustment assumes that each of these curves is a mixture of two populations, one that chooses randomly between the guaranteed and the uncertain benefits and another that answers with its true certainty equivalent. The dashed curves in the figure show the hypothetical distributions of certainty equivalents for populations of respondents giving random answers. They are constructed directly from the specific sequences of values for guaranteed benefits in the question that elicits the certainty equivalents. They generally have more probability mass in the tails than the observed distributions, since half of the respondents choosing randomly would accept a guaranteed benefit of 30 percent or refuse a guaranteed benefit of 70 percent.

The adjustment proceeds by noting that the true distribution of certainty equivalents is the same regardless of the starting value. Since the starting value is randomly assigned, each observed distribution is a mixture of this true distribution and the respective hypothetical distributions for respondents answering randomly. If we conjecture that a specific fraction, δ, of the population is randomizing, then the probability of the true value falling in an interval *j* is:

$$\frac{P_j^O - \delta * P_j^R}{1-\delta},$$

Where P_j^O is the probability of falling in that interval in the observed distribution and P_j^R is the probability of falling in that interval in the hypothetical distribution. For each of the two starting values, we can construct a CDF from these probabilities. The adjustment procedure solves for the value of δ that minimizes the difference between the CDFs so constructed for the two starting values. In our sample, that value of δ is 0.32, suggesting that the difference is minimized under the assumption that 32 percent of our respondents chose randomly. The resulting "adjusted" CDFs are the solid curves in Figure 8.

The adjusted CDFs shown in Figure 8 use only the information from the respondents' choices of guaranteed versus uncertain benefits. Recall that for respondents whose certainty equivalents were close to the expected value of their perceived distribution of benefits, the survey asked an additional question to obtain a tighter interval around their risk premia. Figure 9 shows the two adjusted CDFs with this additional information incorporated.[14]

Figure 10 graphs the CDFs of the risk premia, with and without this adjustment. The CDF for the unadjusted risk premia is the same curve as in Figure 5. The CDF for the adjusted risk premia subtracts the adjusted certainty equivalents (as shown in Figure 9) from the expected benefits from the respondents' perceived benefit distributions. Figure 10 shows that, as in the case of the linear adjustment procedure, the adjustments to the certainty equivalents on balance tend to be positive and thus the adjusted distribution of risk premia shifts lower. The mean adjusted risk premium is 4.09 percent (s.e. = 0.51) and the median adjusted risk premium is 6.02 percent (s.e. = 0.29). Compared to the unadjusted risk premia, the differences of -1.71 percent at the mean and -0.98 percent at the median are statistically significant.[15] While they reduce the

[14] We create individual-level adjusted certainty equivalents from the aggregate-level adjusted certainty equivalent curves in Figure 8 as follows. First, we average the two adjusted curves in Figure 8 because the two adjusted curves only differ due to sampling variation if our model is correct. Next, we calculate the cumulative probability for each individual's unadjusted certainty equivalent response. We do this calculation separately for each group of individuals with the same starting value. Next, we use the average aggregate-level adjusted curve to find the adjusted certainty equivalent that corresponds to the cumulative probability calculated in the previous step, and assign that certainty equivalent to this individual. If there are multiple people who have the same unadjusted certainty equivalent and had the same starting value, we average their adjusted certainty equivalent amounts so that they will also all have the same adjusted certainty equivalent. This procedure assumes that the adjustment does not alter the ranking of the individuals' certainty equivalent amounts within each starting value group. This assumption is correct if individuals did not randomize. So, the individual-level adjusted curves are conditional on non-randomizing.

[15] Appendix Table A3 summarizes the unadjusted and adjusted risk premia distributions, presenting the means, medians, and 25th and 75th percentiles for each conditional on the starting values for the certainty equivalent questions.

mean and median, these adjustments do not have large effects on the predictors of the risk premia.[16]

7. Perceptions of Tax Policy

Most of our analysis has focused on perceived distributions of future benefits. Our survey instrument also asks respondents for their expectations about future Social Security revenues. Table 6 summarizes the responses to questions about three aspects of revenues – the payroll tax rate, the payroll tax base, and the possibility of a new source of funding. Social Security's main source of revenue is a payroll tax of 12.4 percent on all earnings up to a maximum taxable earnings level, which was $106,800 in 2011.[17] Each question asked the respondents for their assessment of the chance that the revenue source would be increased (beyond any increases that will occur under current law) over the horizons of 10 years and when they turn 65.

For the payroll tax rate, the mean responses were probabilities of an increase of 57.5 percent and 63.6 percent over the horizons of 10 years and through age 65. Median responses were slightly higher at 59 and 69 percent, respectively. The survey followed up with a question about what the payroll tax rate would be at each horizon. Mean responses were 16.6 percent at 10 years and 18.2 percent at age 65. Median increases in this case were more moderate, at 15 percent and 16 percent for the 10-year and age-65 horizons, respectively. It is worth noting that, apart from behavioral responses that might mitigate its revenue impact, an increase of the payroll tax rate from 12.4 to 15 percent within 10 years is enough to extend the projected date of trust fund exhaustion from 2036 to beyond 2085.[18]

[16] Appendix Table A2 repeats the first two regressions from Table 4 with the adjusted risk premia. It also presents regressions of the difference between the adjusted and unadjusted risk premia on the same explanatory variables. Of the variables that were statistically significant in Table 4, the positive effect of a year of age on the risk premium is higher by about 0.02 in the adjusted data, and the positive effect of being female on the risk premium is lower by about -0.5 (and is now not statistically significant). The effect of higher risk aversion also increases by 0.174 to 1.146, and this increase is statistically significant.

[17] In 2010, Social Security collected $637.3 billion from payroll taxes and received $117.5 billion as interest on trust fund assets. Income taxation of benefits generated $23.9 billion, with another $2.4 billion reimbursed from the General Fund of the Treasury. See Board of Trustees (2011, Table II.B1).

[18] Board of Trustees (2011, Table II.D2) project a long-term actuarial balance of -2.22 percent of taxable payroll, meaning that an increase of 2.22 percentage points starting in 2011 would generate a projected trust fund balance in 2085 equal to one year's worth of benefit payments.

Responses for the maximum taxable earnings level were very similar to those for the payroll tax rate, with mean probabilities of an increase of 57.7 and 61.9 percent and medians of 59 and 64 percent. The typical respondent thinks it is likely that policy makers will intervene to make the payroll tax base larger as a share of total payroll. In contrast, respondents do not expect policy makers to shore up Social Security's financial status with revenue from a new source. The mean and median responses were all around 40 percent for both the 10-year and age-65 horizons.

8. Effects on Behavior

Our main results establish that respondents recognize the political uncertainty in the distribution of benefits they will receive from Social Security and that this uncertainty generates a loss of welfare on the order of 5 percent of the benefits they are supposed to get under current law. Given that welfare loss, it is reasonable to expect that the political uncertainty is also affecting their behavior as they age toward retirement and their plans for their retirement years. Our survey solicits information about six aspects of retirement that might respond to political uncertainty in Social Security:

1. Savings the respondent does before retirement
2. Hours the respondent works per year before retirement
3. Spending the respondent does during retirement
4. Age at which the respondent stops working for pay
5. Age at which the respondent claims Social Security benefits
6. Assets the respondent leaves to others

The predictions for behavior prior to retirement in a standard life-cycle model are clear. Political uncertainty should be generating precautionary behavior during that period – greater savings, more hours of work per year, and more years of work for pay. The predictions for spending during retirement and bequests are ambiguous. The same precautionary motives for saving and work before retirement suggest less spending and smaller bequests. However, the operation of those precautionary motives on pre-retirement saving and work suggest that average spending and bequests post-retirement could be higher. The prediction for the age at which the respondent claims benefits is also ambiguous. The typical response to uncertainty is work more,

and as claiming ages and retirement ages are linked, this would delay claiming ages. However, political discussions of reform often indicate that those currently receiving benefits will be spared some of the reductions in benefits that prospective beneficiaries will endure. If so, this argues for claiming benefits sooner to resolve the uncertainty about what they will be.

The survey asks respondents qualitatively how they would change these behaviors under either of two scenarios: a guaranteed contract at 100 percent of what they are supposed to get under current law and a guaranteed contract at the expected benefits of the perceived distribution of future benefits. Both scenarios reduce the political uncertainty to zero. The variation in the question allows us to also assess the impact of the income effect associated with anticipated reforms to Social Security. Table 7 presents the percentages of the population who report that they would significantly increase or decrease, somewhat increase or decrease, or not change their behavior for each of the six behaviors under the two scenarios.

Consider first the scenario shown in Panel A of Table 7 in which benefits are guaranteed at the respondent's expected benefit level, so that the uncertainty is removed and the average benefit reduction is made certain. Two general features of the results stand out. First, a sizable fraction of the respondents indicate that they would make no change. For two questions, half or more indicate no change and for two other questions, no change is the highest-frequency response. Second, for those indicating a change, the percentages are one-sided, with the less frequent change (increase or decrease) having less than 10 percent representation when the two categories are added. Focusing now on the direction of the change for each question, more than half of respondents indicate that they would increase their pre-retirement savings and the age at which they stop working for pay. Nearly half indicate that they would increase the hours they work per year. Despite their additional saving and pre-retirement income, more than half would reduce their spending during retirement and about 40 percent would decrease the assets they leave to others.

Panel B of Table 7 shows the responses to the same questions in the scenario in which benefits are guaranteed at 100 percent of their current-law values. There are two differences with the results in Panel A, attributable to the income effect of guaranteeing the benefits at their higher level. First, larger fractions of the respondents report that they would not change behavior. The difference is about 17 percentage points, averaged across all six questions. Second, although the larger changes (increase or decrease) are still in the same directions as in

Panel A, the directions of the changes are less one-sided. Both of these differences are what we would expect from a pure income effect – less saving, less work, more consumption, and larger bequests. While the income effect seems to be properly reflected in these tabulations, it is noteworthy that even a guarantee at 100 percent of the benefits under current law generates responses for prospective behavior that move opposite to predictions of a standard life cycle model.

9. Conclusion

The projected financial shortfalls in the Social Security program have been the subject of active policy discussion for over 15 years. During that period, no clear policy direction has emerged for how the projected shortfalls will be closed, and, as a result, households are exposed to political uncertainty about the future taxes and benefits. We study the deadweight loss of political uncertainty in the Social Security program in the United States using the results of an original internet-based survey of U.S. adults between the ages of 25 - 59.

The responses to the survey indicate that almost all individuals are aware of the future shortfall, that most lack confidence that they will receive the benefits they are supposed to get under current law, and that they perceive a wide range of possible benefit outcomes. Through questions designed to construct the perceived distribution of Social Security benefits and the certainty equivalent to that distribution, we show that on average respondents would be willing to forego 4 – 6 percent of the benefits they are supposed to get under current law to remove the political uncertainty associated with their future benefits. There are a number of demographic and other control variables that predict this risk premium in the cross-section. It is increasing in age and decreasing in income. It is higher for retired individuals and those who are Black or Hispanic. Despite the welfare consequences, there is no evidence that resolving the political uncertainty surrounding future Social Security benefits would change work or saving patterns by eliminating the motive for precautionary behavior against the uncertainty.

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Table 1: Summary Statistics

Variable	(1) Mean	(1) Standard Deviation	(2) 25th Percentile	(3) Median	(4) 75th Percentile	(5) Number of Observations
Key Outcome Variables						
(all in Percent of Benefits Under Current Law)						
Expected Benefits	59.4	30.1	37.1	62.6	83.4	2,960
Standard Deviation of Expected Benefits	22.5	13.7	11.4	23.0	33.3	2,960
Midpoint of Certainty Equivalent	53.7	27.8	32.5	57.5	76.5	2,939
Midpoint of Risk Premium	5.8	28.0	0.0	7.0	16.5	2,939
Demographic Control Variables						
Age	42.5	10.0	34.0	43.0	51.0	3,053
Ethnicity						
White	0.702					3,053
Black	0.103					3,053
Hispanic	0.154					3,053
Other	0.041					3,053
Education						
High School Dropout	0.088					3,053
High School Education	0.286					3,053
Some College	0.229					3,053
Bachelor's or Above	0.397					3,053
ln(Household Size)	1.00	0.52	0.69	1.10	1.39	3,053
ln(Household Income)	10.97	0.89	10.53	11.12	11.63	3,053
Martial Status						
Married	0.643					3,053
Widowed	0.013					3,053
Divorced	0.076					3,053
Separated	0.018					3,053
Never Married	0.157					3,053
Living with partner	0.092					3,053
Female	0.464					3,053
Homeowner	0.726					3,053
Region						
Northeast	0.174					3,053
Midwest	0.237					3,053
South	0.354					3,053
West	0.235					3,053
Lives in MSA	0.843					3,053
Kids in Household	0.467					3,053
Employment Status						
Currently Working	0.788					3,053
Retired	0.019					3,053
Disabled	0.021					3,053
Unemployed	0.086					3,053
Not Working	0.085					3,053
Other Control Variables						
Risk Aversion Index (Using Lifetime Income Gambles, 1-6 scale)	4.8	1.3	4.0	5.0	6.0	2,845
Subjective Probability of Surviving To Age 75 (percent)	67.9	22.5	51.0	71.0	85.0	2,935
Importance of Social Security Funds during Retirement (1-4 scale)	2.8	1.0	2.0	3.0	4.0	2,982
Trust in Elected Federal Officials (1-5 scale)	2.2	1.0	1.0	2.0	3.0	3,018
Optimism Indicator (standarized variable)	0.0	1.0	-0.6	0.0	0.7	2,955
Financial Literacy (0-4 scale)	2.4	1.2	2.0	3.0	3.0	3,053

Notes: Key outcome variables are measured in the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The baseline demographics are the values in the standard demographic profile variables at the time of the baseline survey (June 2010). The standard demographic profile is collected by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011. See the text and Appendix B for a discussion of and definitions of the key outcome variables. The risk-aversion variable is an index that runs from 1 to 6 and it based on fice questions about hypothetical choices between a riskless and a risky job (Q6.1-Q6.5). The index corresponds respectively to the following six CRRA ranges: [<0.5], [0.5-1],[1-2],[2-4],[4-8],[>8]. Importance of Social Security Funds during Retirement is measured on a 4-point scale from "not so important" to "extremely important" (Q6.10). Trust in Elected Federal Officials is a on a five-point scale, with higher values indicating more trust (Q6.11). The Optimism Indicator is the standardized average of the non-missing responses to the six items (reverse coded when appropriate) of Q6.12. The financial literacy index is the number of correct responses to the four questions on financial literacy (Q6.13-Q6.13).

Table 2: Expectations about Social Security

	(1) Mean		(2) Median		(3) Number of Observations
Panel A: Respondent Confidence in Social Security					
Very Confident	0.033	(0.003)	..	..	3,045
Somewhat Confident	0.223	(0.008)	..	..	3,045
Not too Confident	0.453	(0.009)	..	..	3,045
Not at all Confident	0.291	(0.008)	..	..	3,045
Panel B: Does Social Security Face a Financial Shortfall?					
Yes	0.914	(0.005)	..	..	3,036
No	0.086	(0.005)	..	..	3,036
Panel C: How Will the Government Address the Shortfall?					
Mostly or Entirely through Benefit Cuts	0.183	(0.007)	..	..	3,028
Balanced Mix of Benefit Cuts and Tax Increases	0.576	(0.009)	..	..	3,028
Mostly or Entirely through Tax Increases	0.241	(0.008)	..	..	3,028
Panel D: Chance of a Decline in General Level of Benefits					
Within 10 Years	61.0	(0.5)	61.0	(0.8)	2,937
By Age 65	66.6	(0.5)	71.0	(0.5)	2,840
Panel E: Do you Expect More, the Same, or Less Benefits than you are Supposed to Get Under Current Law?					
More	0.028	(0.003)	..	..	3,026
The Same	0.241	(0.008)	..	..	3,026
Less	0.731	(0.008)	..	..	3,026
Panel F: Point Estimate of Expected Benefits as % of Current Benefits	65.9	(0.6)	70.0	(0.5)	2,956
Panel G: Importance of Benefit Amount Uncertainty					
Matters Very Much	0.475	(0.009)	..	..	3,038
Matters Somewhat	0.320	(0.008)	..	..	3,038
Matters Little	0.148	(0.006)	..	..	3,038
Does Not Matter at All	0.057	(0.004)	..	..	3,038

Notes: Robust standard errors in parentheses. Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011. See Appendix B for exact question definitions: Q1.2 for Panel A, Q2.1 for Panel B, Q2.2 for Panel C, Q2.11 for Panel D, Q3.1 for Panel E, Q3.2 for Panel F, Q4.1 for Panel G.

Table 3: Correlates of Perceived Distribution of Future Social Security Benefits

	(1)	(2)	(3)	(4)
	Dep. Variable: Expected Benefits	Dep. Variable: Expected Benefits	Dep. Variable: Standard Deviation of Benefits	Dep. Variable: Standard Deviation of Benefits
Age	0.96*** (0.06)	0.94*** (0.06)	-0.22*** (0.03)	-0.21*** (0.03)
Black	7.4*** (2.0)	5.1*** (1.9)	2.8*** (1.0)	3.1*** (1.0)
Hispanic	5.1*** (1.6)	3.9** (1.6)	1.6** (0.8)	1.8** (0.8)
Other	-0.9 (2.9)	-0.7 (2.8)	1.9 (1.3)	2.0 (1.2)
Highschool Dropout	-0.1 (2.3)	0.6 (2.2)	3.8*** (1.1)	3.6*** (1.1)
Some College	0.6 (1.5)	-0.4 (1.5)	-0.7 (0.7)	-0.7 (0.7)
Bachelor's Degree or Higher	3.3** (1.4)	0.5 (1.5)	0.1 (0.7)	0.1 (0.7)
Ln Household Size	1.4 (1.6)	0.8 (1.6)	0.5 (0.8)	0.7 (0.8)
Ln Household Income	-2.7*** (0.8)	-3.2*** (0.8)	-0.9** (0.4)	-0.9** (0.4)
Widowed	8.5** (4.0)	7.0* (4.0)	-0.7 (2.9)	-0.7 (2.9)
Divorced	0.6 (2.1)	-0.5 (2.0)	-0.1 (1.1)	0.2 (1.1)
Separated	1.7 (3.7)	-0.4 (3.7)	-0.3 (1.9)	-0.1 (1.9)
Never Married	2.8 (1.8)	2.9 (1.7)	-1.0 (0.9)	-0.9 (0.9)
Lives With Partner	0.6 (2.0)	0.6 (1.9)	0.6 (0.9)	0.7 (0.9)
Female	-2.5*** (1.1)	-3.0*** (1.1)	0.0 (0.5)	0.3 (0.5)
Owns House	-1.3 (1.3)	-1.1 (1.3)	-1.3** (0.7)	-1.3* (0.7)
Lives in Northeast	4.5*** (1.5)	4.0*** (1.5)	0.1 (0.7)	0.1 (0.7)
Lives in Midwest	2.2 (1.4)	2.4* (1.3)	0.1 (0.7)	0.1 (0.7)
Lives in West	0.4 (1.5)	0.1 (1.4)	1.1* (0.7)	1.2* (0.7)
Lives in MSA	2.6* (1.5)	2.2 (1.5)	-0.1 (0.7)	-0.1 (0.7)
Kids in Household	-5.9*** (1.6)	-5.4*** (1.5)	0.2 (0.8)	0.1 (0.8)
Retired	10.0** (3.9)	9.4** (3.8)	-3.4* (1.9)	-3.6* (1.9)
Disabled	-2.3 (3.9)	-2.5 (3.8)	-1.3 (2.2)	-1.5 (2.2)
Unemployed	-1.5 (2.1)	-2.0 (2.0)	-1.3 (1.0)	-1.4 (1.0)
Not Working	-0.7 (2.0)	-0.6 (2.0)	1.9** (0.9)	1.8* (0.9)
Risk Preference		-0.2 (0.4)		-0.5** (0.2)
Subjective Probability of Surviving To Age 75		0.1*** (0.0)		0.0** (0.0)
Importance of SS to Retirement Spending		2.3*** (0.6)		-0.5* (0.3)
Trust in Elected Federal Officials		6.0*** (0.5)		0.0 (0.3)
Optimism Index		1.8*** (0.6)		-0.4 (0.3)
Financial Literacy		1.5*** (0.5)		0.0 (0.3)
R^2	0.136	0.202	0.064	0.071
N	2,960	2,960	2,960	2,960

Notes: Robust standard errors in parentheses. * significant at 10%, ** significant at 5% *** significant at 1%. Missing values of explanatory values are dummied out. Expected Benefits and Standard Deviation of Expected Benefits are based on the bin/ball question that elicites the subjective distribution of future Social Security benefits (Q3.3-Q3.6). Both variables are expressed as a percentage of benefits under current law. Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011.

Table 4: Correlates of Risk Premia

	(1)		(2)		(3)		(4)	
	Dependent Variable: Risk Premium Based on Certainty Equivalent		Dependent Variable: Risk Premium Based on Certainty Equivalent		Dependent Variable: Simulated Risk Premium for CRRA = 3		Dependent Variable: Simulated Risk Premium for CRRA = 3	
Age	0.31***	(0.06)	0.29***	(0.06)	-0.04	(0.02)	-0.09***	(0.02)
Black	10.6***	(2.1)	9.6***	(2.1)	1.6*	(0.9)	1.5*	(0.8)
Hispanic	5.5***	(1.7)	4.8***	(1.7)	2.5***	(0.8)	1.7**	(0.7)
Other	-4.4	(2.7)	-4.0	(2.7)	1.9*	(1.0)	0.5	(1.0)
Highschool Dropout	2.8	(2.4)	3.3	(2.4)	2.5**	(1.2)	2.1*	(1.1)
Some College	-1.6	(1.5)	-1.6	(1.5)	-2.0***	(0.7)	-0.9	(0.6)
Bachelor's Degree or Higher	0.0	(1.3)	-0.6	(1.4)	-3.6***	(0.6)	-1.0*	(0.6)
Ln Household Size	0.6	(1.5)	0.3	(1.6)	1.6**	(0.8)	1.2*	(0.7)
Ln Household Income	-1.8**	(0.9)	-1.9**	(0.9)	-1.7***	(0.4)	-0.7**	(0.4)
Widowed	6.2	(3.9)	5.6	(4.0)	-1.2	(2.2)	-0.2	(2.2)
Divorced	-0.4	(2.1)	-0.4	(2.1)	2.2*	(1.1)	0.9	(1.0)
Separated	7.3**	(3.3)	6.1*	(3.3)	2.0	(2.1)	0.7	(1.8)
Never Married	1.5	(1.7)	1.9	(1.7)	-0.2	(0.8)	-0.8	(0.7)
Lives With Partner	1.5	(2.1)	1.5	(2.1)	1.6*	(0.9)	0.0	(0.8)
Female	2.5**	(1.1)	1.9*	(1.1)	0.4	(0.5)	-0.1	(0.5)
Owns House	-1.9	(1.4)	-1.9	(1.4)	-1.6**	(0.6)	-1.3**	(0.6)
Lives in Northeast	-0.7	(1.4)	-1.0	(1.4)	-0.4	(0.6)	-0.8	(0.6)
Lives in Midwest	-0.9	(1.3)	-1.0	(1.3)	-0.2	(0.6)	-0.1	(0.6)
Lives in West	-2.3	(1.5)	-2.3	(1.4)	-0.2	(0.6)	0.4	(0.6)
Lives in MSA	0.4	(1.5)	0.2	(1.5)	-0.3	(0.7)	0.2	(0.6)
Kids in Household	-1.7	(1.5)	-1.1	(1.5)	-0.4	(0.7)	-0.3	(0.6)
Retired	10.7***	(3.5)	10.6***	(3.5)	-2.2	(1.6)	0.0	(1.5)
Disabled	-5.1	(4.1)	-4.7	(4.1)	-0.6	(2.3)	-0.3	(2.2)
Unemployed	-0.7	(2.2)	-0.8	(2.2)	-0.4	(1.0)	-0.4	(1.0)
Not Working	2.1	(2.0)	1.9	(2.0)	-0.6	(0.9)	0.8	(0.8)
Risk Preference			1.0**	(0.4)			-0.33**	(0.16)
Subjective Probability of Surviving To Age 75			0.1**	(0.0)			0.0	(0.0)
Importance of SS to Retirement Spending			0.9	(0.6)			5.1***	(0.2)
Trust in Elected Federal Officials			2.3***	(0.5)			0.1	(0.2)
Optimism Index			0.7	(0.5)			-0.4**	(0.2)
Financial Literacy			0.5	(0.6)			0.2	(0.2)
R^2	0.052		0.076		0.090		0.235	
N	2939		2939		2960		2960	

Notes: Robust standard errors in parentheses. * significant at 10%, ** significant at 5% *** significant at 1%. Missing values of explanatory values are dummied out. The risk premium is the percent of benefits under current law that respondents are willing to sacrifice in order to receive their expected benefits for with certainty. The simulated risk premium is based on the respondent's reported subjective distribution of own future Social Security benefits, the fraction of retirement spending covered by Social Security benefits, and an assumed CRRA utility function with a CRRA of 3. See text for further details. Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011.

Table 5: Are Responses on Certainty Equivalence Meaningful?

	(1)	(2)
Panel A: Effect of Starting Value on First Choice	Dependent Variable: Dummy for Respondent Choosing Guaranteed Benefits	
Starting Value is 70%	0.336*** (0.017)	0.342*** (0.017)
Guaranteed Benefits is Second Option	-0.012 (0.017)	-0.016 (0.017)
Demographic and Other Controls	No	Yes
R^2	0.113	0.188
N	2,939	2,939
Panel B: Effects of Perceived Uncertainty and Risk-Aversion	Dependent Variable: Certainty Equivalent of Social Security Benefits	
Expected Social Security Benefits	0.487*** (0.019)	0.468*** (0.021)
Perceived Standard Deviation of own Social Security Benefits	-0.409*** (0.036)	-0.371*** (0.038)
Risk Aversion Index	-1.584*** (0.338)	-1.302*** (0.358)
Demographic and Other Controls	No	Yes
R^2	0.332	0.357
N	2,939	2,939
Panel C: Effect of Starting Value on Certainty Equivalent	Dependent Variable: Certainty Equivalent of Social Security Benefits	
Starting Value is 70%	7.2*** (1.0)	6.8*** (1.0)
Guaranteed Benefits is Second Option	0.543 (1.017)	0.977 (0.961)
Demographic and Other Controls	No	Yes
R^2	0.017	0.141
N	2,939	2,939
Panel D: Effect of Weather Example On Perceived Uncertainty	Dependent Variable: Simulated Certainty Equivalent (CRRA = 3)	
Respondent Sees High SD Weather Example	-3.1*** (1.2)	-3.5*** (1.1)
Demographic and Other Controls	No	Yes
R^2	0.002	0.206
N	2,960	2,960

Notes: Robust standard errors in parentheses. * significant at 10%, ** significant at 5% *** significant at 1%. Demographic and other controls is the set of controls used in column 2 of Table 3. The Certainty Equivalent is the percent of benefits under current law that the respondent is just willing to accept in place of benefits under current law if the certainty equivalent is guaranteed in an unbreakable contract. The simulated certainty equivalent is based on the respondent's reported subjective distribution of own future Social Security benefits, the fraction of retirement spending covered by Social Security benefits, and an assumed CRRA utility function with a CRRA of 3. See text for further details. Expected Social Security Benefits and Standard Deviation of Social Security Benefits are based on the respondent's subjective probability distribution of future Social Security Benefits as elicited by the Bin/Ball question (Q3.3-Q3.6). The Risk Aversion Index is defined in the note the Table 1. The weather example is an example of a probability distribution using the Bin/Ball format that was presented to the respondent prior to Q3.3. The variable Respondent Sees High SD Weather Example is a dummy that equals 1 if the variance of the distribution in the example was high. Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011. Notes: Missing values of explanatory values are dummied out. * significant at 10%, ** significant at 5% *** significant at 1%.

Table 6: Expectations about Social Security Taxes

	(1) Mean	(2) Median	(3) N
Percent chance that the Social Security payroll tax rate will be raised above 12.4%...			
Sometime within the next 10 years?	57.5 (0.48)	59 (1.25)	2,884
By the time you turn 65?	63.6 (0.50)	69 (1.00)	2,792
What do you expect the Social Security payroll tax rate to be…			
In ten years?	16.6 (0.11)	15 (0.04)	2,980
By the time you turn 65?	18.2 (0.13)	16 (0.20)	2,881
Percent chance that lawmakers will raise the Social Security taxable earnings limit beyond the automatic adjustments for inflation sometime…			
Within the next 10 years?	57.7 (0.50)	59 (1.25)	2,915
By the time you turn 65?	61.9 (0.52)	64 (1.76)	2,815
Percent chance that lawmakers will add a new source of revenue to fund Social Security…			
Within the next 10 years?	39.2 (0.46)	40 (0.49)	2,913
By the time you turn 65?	43.2 (0.48)	42 (1.26)	2,827

Notes: Robust standard errors in parentheses. See Q2.3, Q2.4, Q2.5, Q2.6, Q2.7, Q2.8, Q2.9, and Q2.10, respectively, for exact wording of the dependent variables. Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011.

Table 7: Hypothetical Behavior Responses to Guaranteed Contracts

	(1) Significantly Decrease	(2) Somewhat Decrease	(3) No Change	(4) Somewhat Increase	(5) Significantly Increase	(6) Average Response	(7) N
Panel A: Effect of a Guaranteed Contract Offering Expected Social Security Benefits on:							
Savings Before Retirement	2.8%	4.2%	39.2%	31.7%	22.2%	3.66***	1,466
	(0.4%)	(0.5%)	(1.3%)	(1.2%)	(1.1%)	(0.03)	
Hours Worked Per Year Before Retirement	1.8%	4.4%	55.5%	23.9%	14.4%	3.446***	1,463
	(0.4%)	(0.5%)	(1.3%)	(1.1%)	(0.9%)	(0.02)	
Spending During Retirement	17.7%	44.3%	29.3%	6.2%	2.5%	2.31***	1,461
	(1.0%)	(1.3%)	(1.2%)	(0.6%)	(0.4%)	(0.02)	
Age When You Stop Working for Pay	1.5%	6.9%	35.3%	38.0%	18.3%	3.65***	1,457
	(0.3%)	(0.7%)	(1.3%)	(1.3%)	(1.0%)	(0.02)	
Age When You Start Claiming SS Benefits	2.3%	6.6%	41.1%	35.8%	14.1%	3.53***	1,461
	(0.4%)	(0.7%)	(1.3%)	(1.3%)	(0.9%)	(0.02)	
Assets You Leave to Others	15.3%	25.0%	50.0%	6.5%	3.1%	2.57***	1,466
	(0.9%)	(1.1%)	(1.3%)	(0.6%)	(0.5%)	(0.02)	
Panel B: Effect of a Guaranteed Contract Offering 100% of Benefits Under Current Law on:							
Savings Before Retirement	2.8%	6.1%	60.1%	21.0%	10.0%	3.29***	1,497
	(0.4%)	(0.6%)	(1.3%)	(1.1%)	(0.8%)	(0.02)	
Hours Worked Per Year Before Retirement	1.9%	6.8%	67.4%	17.0%	6.9%	3.20***	1,486
	(0.4%)	(0.7%)	(1.2%)	(1.0%)	(0.7%)	(0.02)	
Spending During Retirement	7.7%	24.0%	48.5%	17.6%	2.2%	2.83***	1,490
	(0.7%)	(1.1%)	(1.3%)	(1.0%)	(0.4%)	(0.02)	
Age When You Stop Working for Pay	2.4%	15.1%	54.7%	20.6%	7.2%	3.15***	1,487
	(0.4%)	(0.9%)	(1.3%)	(1.1%)	(0.7%)	(0.02)	
Age When You Start Claiming SS Benefits	2.6%	11.1%	59.4%	20.5%	6.4%	3.17***	1,491
	(0.4%)	(0.8%)	(1.3%)	(1.0%)	(0.6%)	(0.02)	
Assets You Leave to Others	6.1%	10.4%	62.3%	17.3%	3.9%	3.03***	1,497
	(0.6%)	(0.8%)	(1.3%)	(1.0%)	(0.5%)	(0.02)	

Notes: Robust standard errors in parentheses. * significant at 10%, ** significant at 5% *** significant at 1%. See Q5.1 for wording of the question on hypothetical responses to guaranteed Social Security benefits. Respondents were randomized between being as about guaranteed benefits at the level of their expected benefits (Panel A) and guaranteed benefits at a level of the full benefits under current law (Panel B). Respondents were provided with 5 choices on their hypothetical behavior response, ranging from Significantly Decrease (1) to Significantly Increase (5) with No Change (3) in the middle. Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011.

Table 8: Risk Premium as Predictor of Planned Claim and Retirement Age

	(1)	(2)
Panel A: Effect of Self-Reported Risk Premium	Dependent Variable: Planned Claim Age	
Self-Reported Risk Premium	-0.021*** (0.004)	-0.016*** (0.004)
Demographic and Other Controls	No	Yes
R^2	0.015	0.056
N	2,873	2,873
Panel B: Effect of Simulated Risk Premium	Dependent Variable: Planned Claim Age	
Simulated Risk Premium (CRRA=3)	-0.016* (0.008)	-0.007 (0.010)
Demographic and Other Controls	No	Yes
R^2	0.002	0.049
N	2,888	2,888
Panel C: Effect of Self-Reported Risk Premium	Dependent Variable: Planned Retirement Age	
Self-Reported Risk Premium	-0.033*** (0.009)	-0.027*** (0.009)
Demographic and Other Controls	No	Yes
R^2	0.011	0.110
N	2,271	2,271
Panel D: Effect of Simulated Risk Premium	Dependent Variable: Planned Retirement Age	
Simulated Risk Premium (CRRA=3)	0.014 (0.013)	-0.025 (0.015)
Demographic and Other Controls	No	Yes
R^2	0.000	0.106
N	2,786	2,786

Notes: Robust standard errors in parentheses. * significant at 10%, ** significant at 5% *** significant at 1%. See text for descriptions of the self-reported risk-premium and the simulated risk-premium. Claim age is the age at which the respondent plans to claim Social Security benefits (Q6.7). Retirement age is the age at which the respondent stopped working for pay or plans to stop working for pay (Q6.6). Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011. The sample in Panels C and D is further limited to those having ever worked and reporting a retirement age higher than 30.

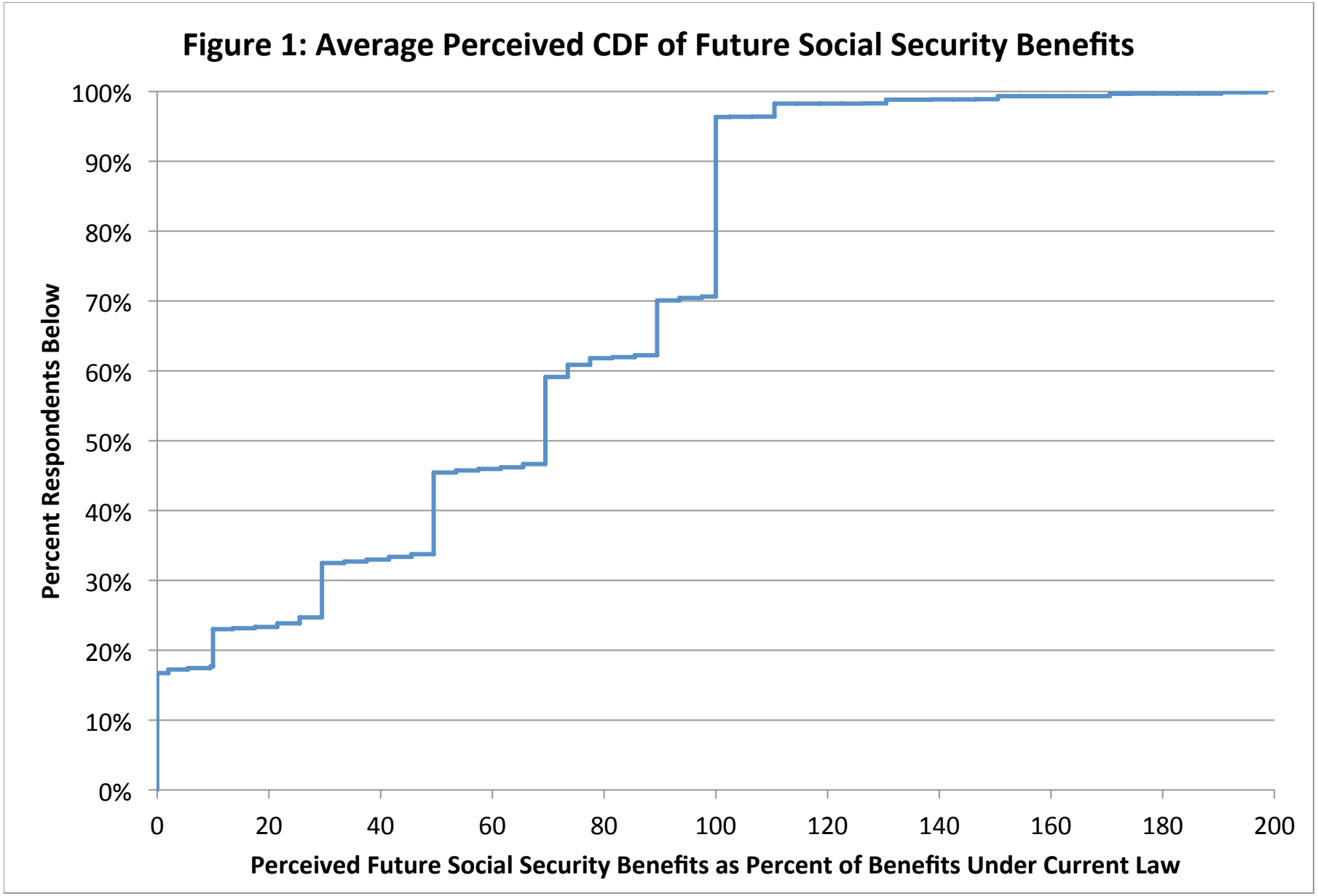


Figure 1: Average Perceived CDF of Future Social Security Benefits
Percent Respondents Below
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
20
40
60
80
100
120
140
160
180
200
Perceived Future Social Security Benefits as Percent of Benefits Under Current Law

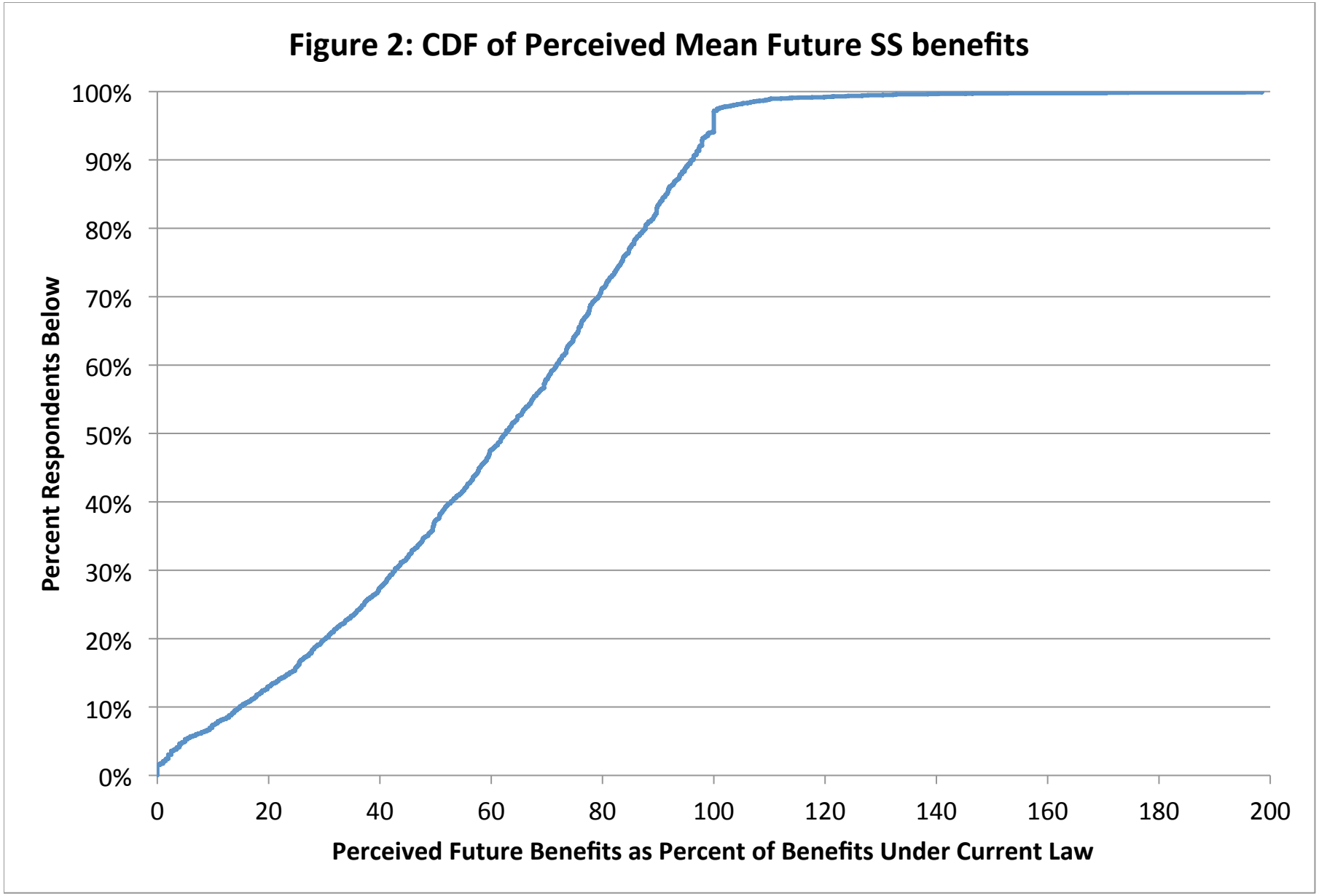


Figure 2: CDF of Perceived Mean Future SS benefits
Percent Respondents Below
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
20
40
60
80
100
120
140
160
180
200
Perceived Future Benefits as Percent of Benefits Under Current Law

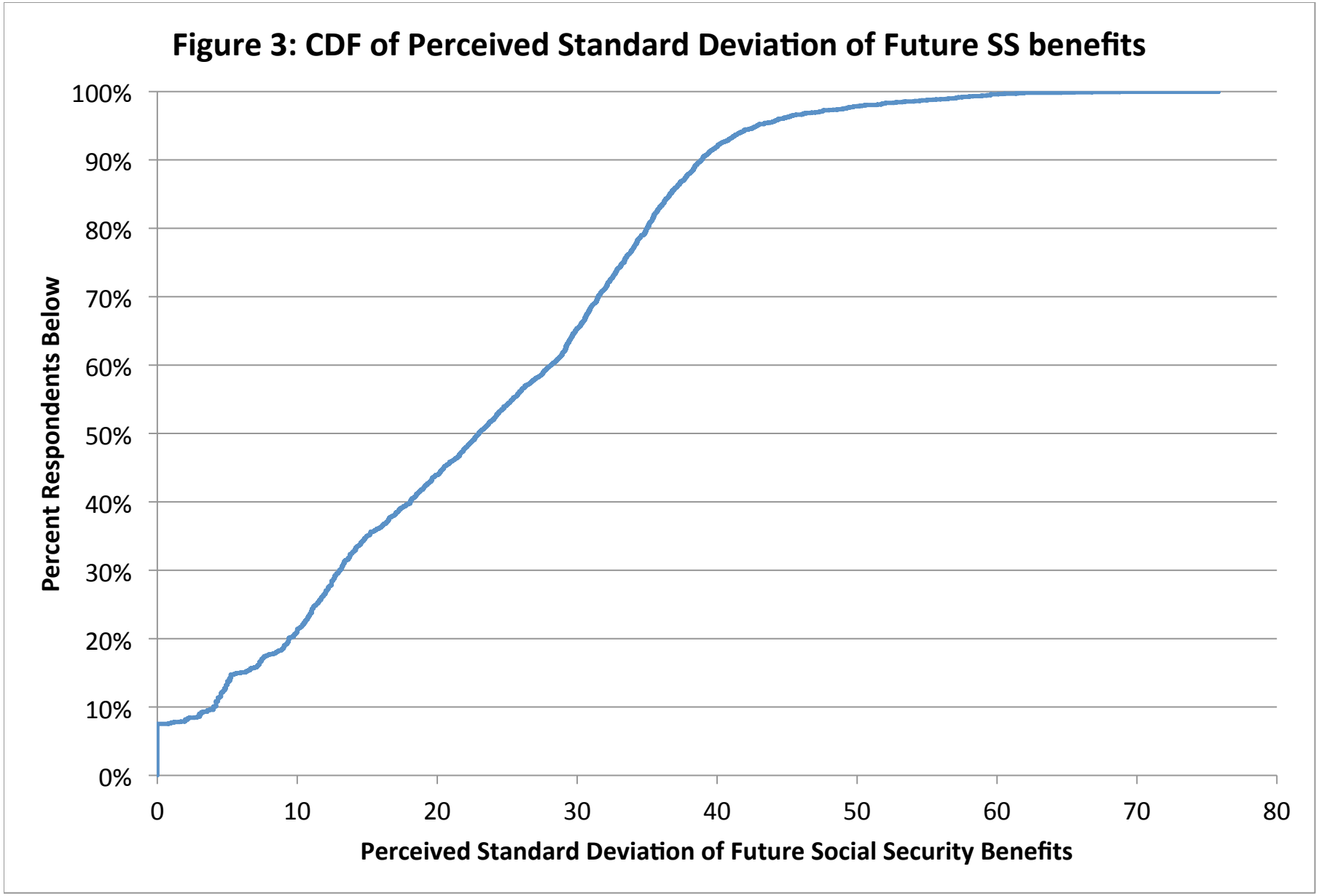


Figure 3: CDF of Perceived Standard Deviation of Future SS benefits
Percent Respondents Below
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
10
20
30
40
50
60
70
80
Perceived Standard Deviation of Future Social Security Benefits

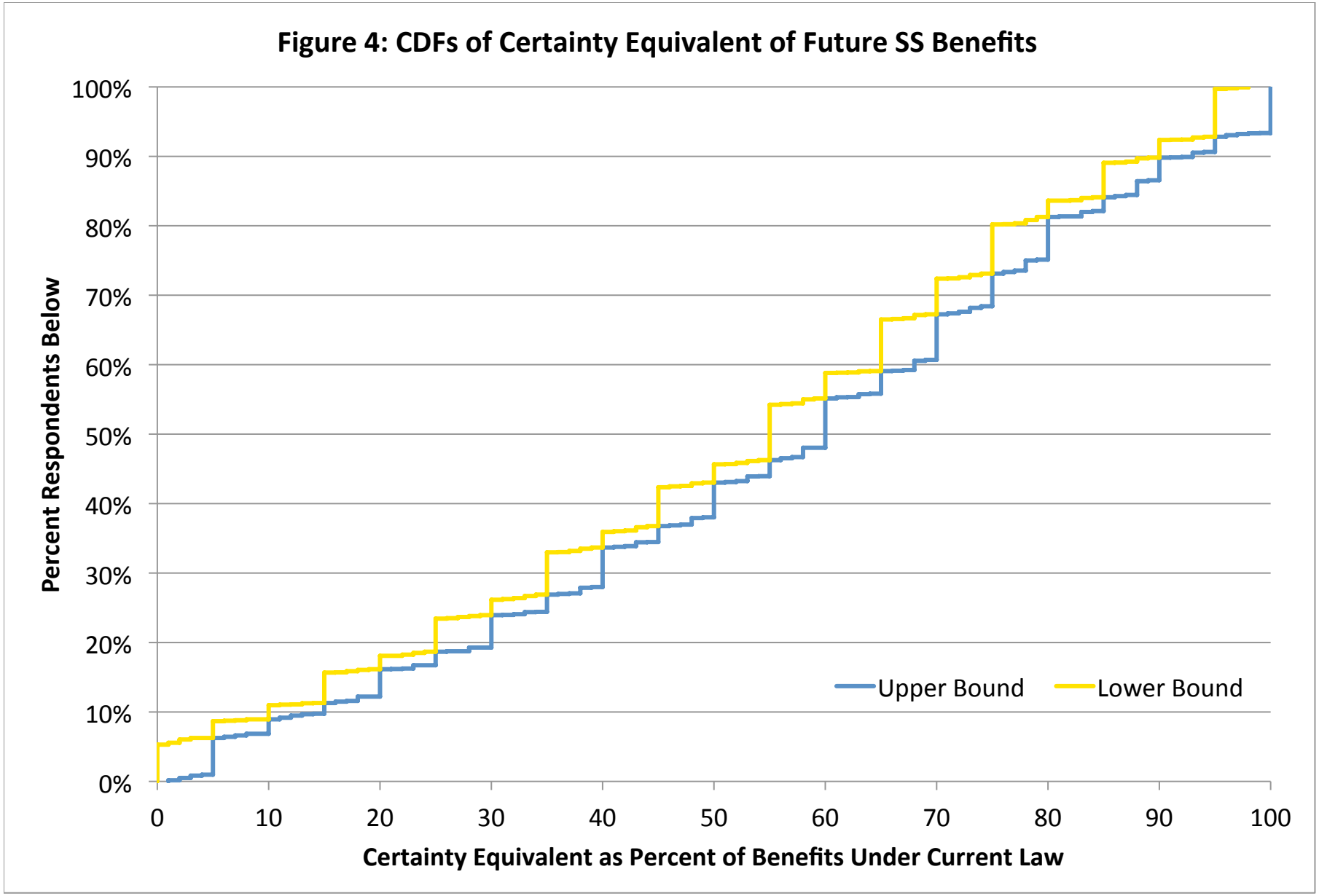


Figure 4: CDFs of Certainty Equivalent of Future SS Benefits
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent Respondents Below
0
10
20
30
40
50
60
70
80
90
100
Certainty Equivalent as Percent of Benefits Under Current Law
Upper Bound
Lower Bound

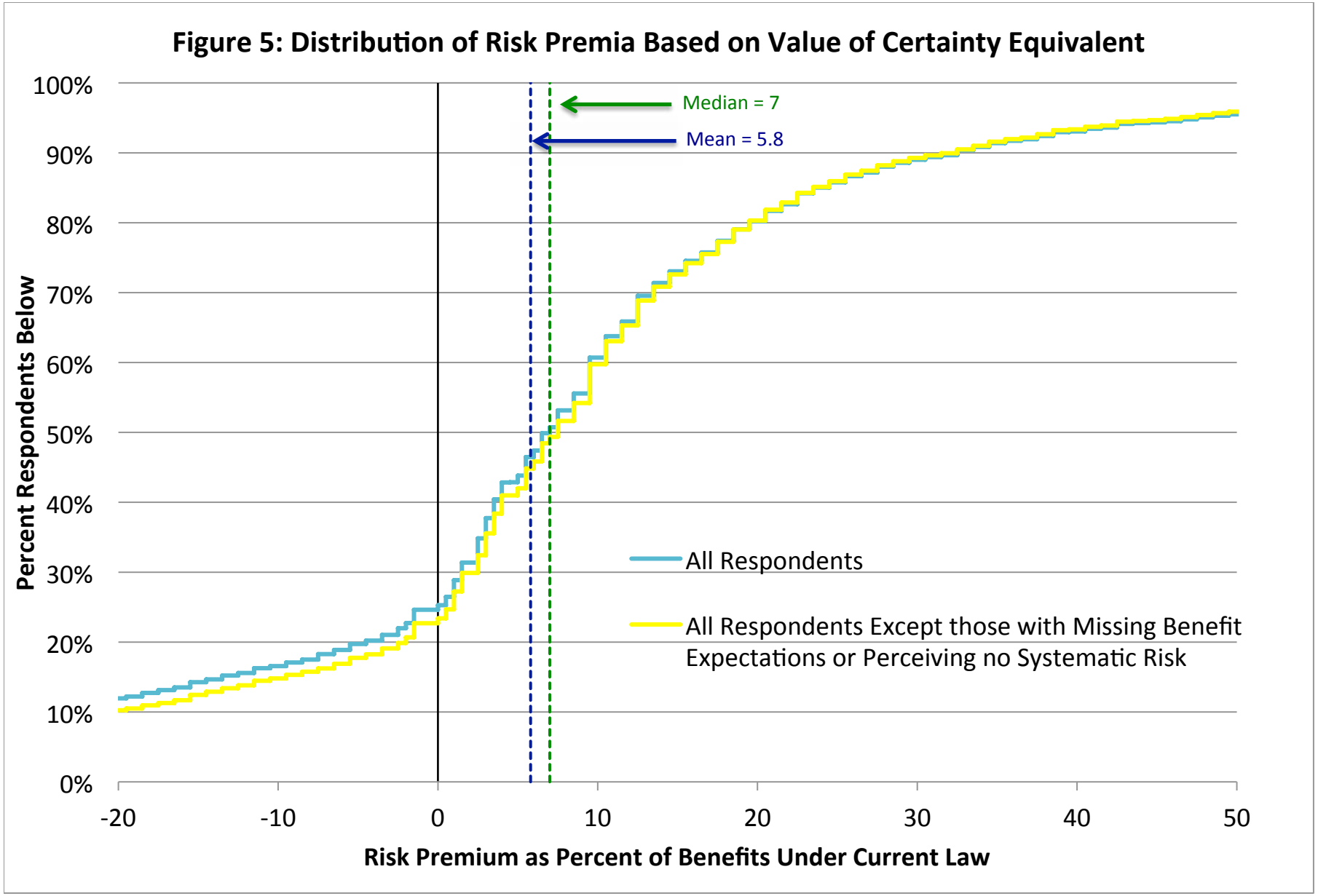


Figure 5: Distribution of Risk Premia Based on Value of Certainty Equivalent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent Respondents Below
Median = 7
Mean = 5.8
All Respondents
All Respondents Except those with Missing Benefit Expectations or Perceiving no Systematic Risk
-20
-10
0
10
20
30
40
50
Risk Premium as Percent of Benefits Under Current Law

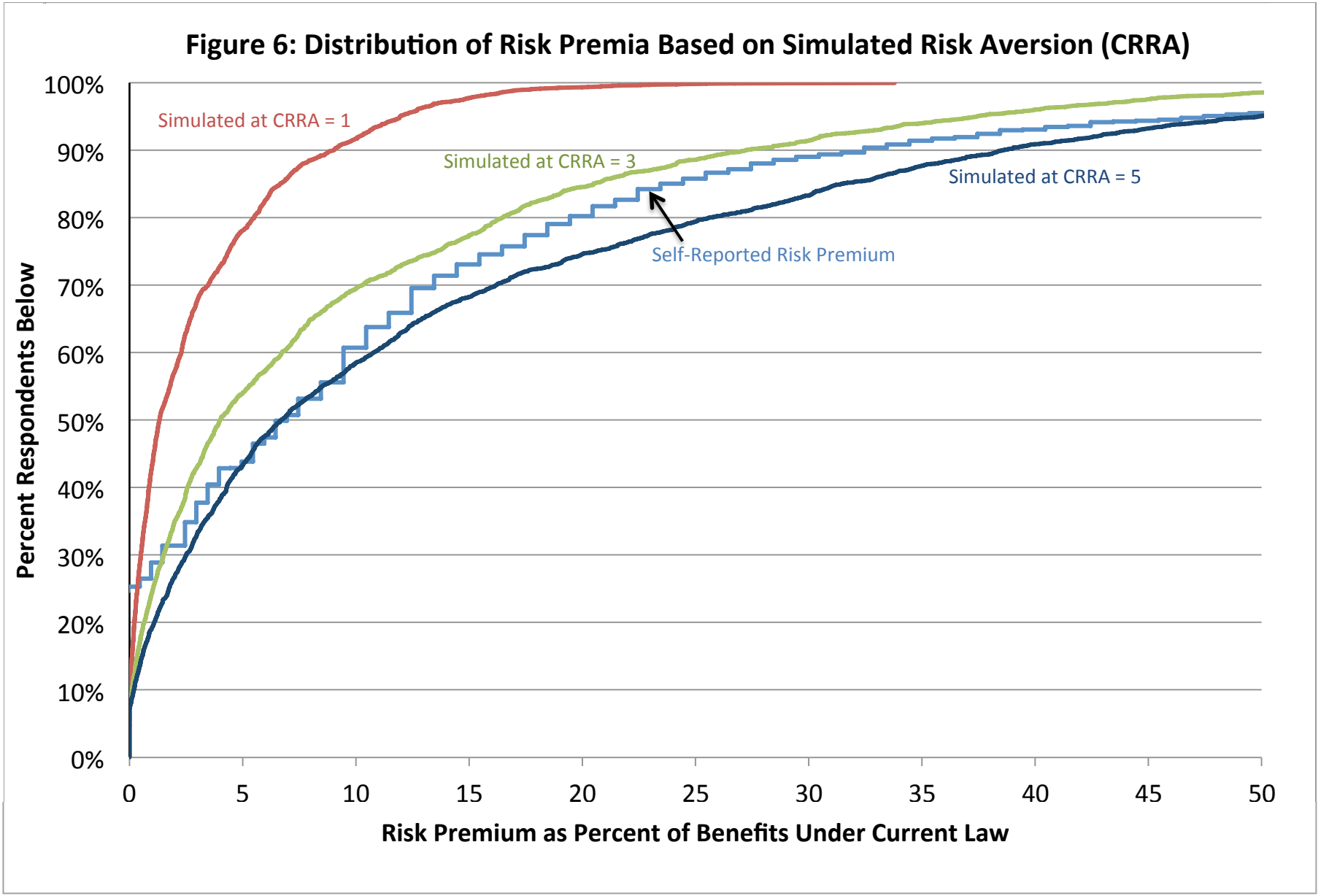


Figure 6: Distribution of Risk Premia Based on Simulated Risk Aversion (CRRA)
Percent Respondents Below
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Simulated at CRRA = 1
Simulated at CRRA = 3
Simulated at CRRA = 5
Self-Reported Risk Premium
0
5
10
15
20
25
30
35
40
45
50
Risk Premium as Percent of Benefits Under Current Law

Figure 7a: Expected Benefits by Age Group (Mean and 95% Confidence Interval)

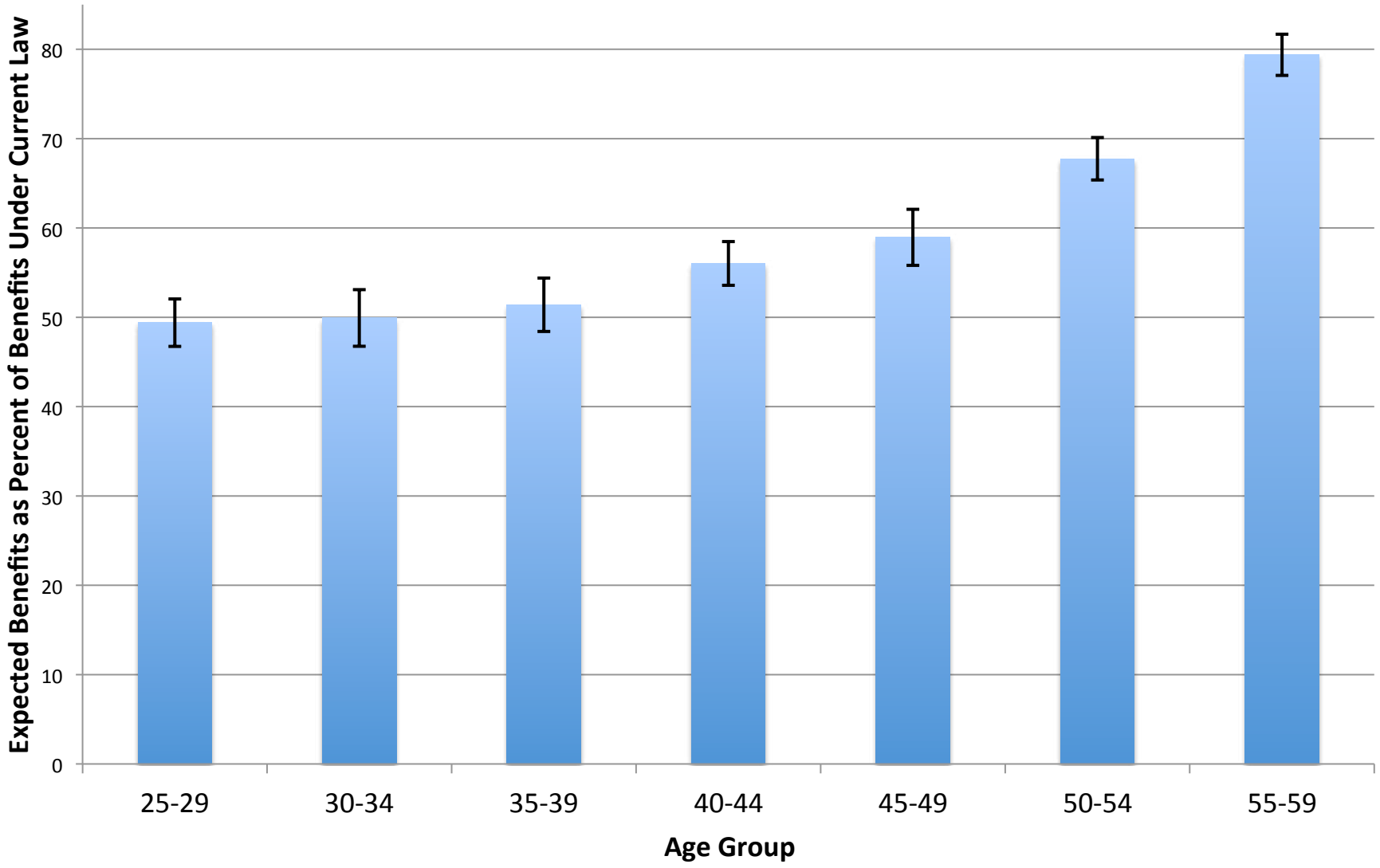


Figure 7b: Perceived Risk Premium by Age Group (Mean and 95% Confidence Interval)

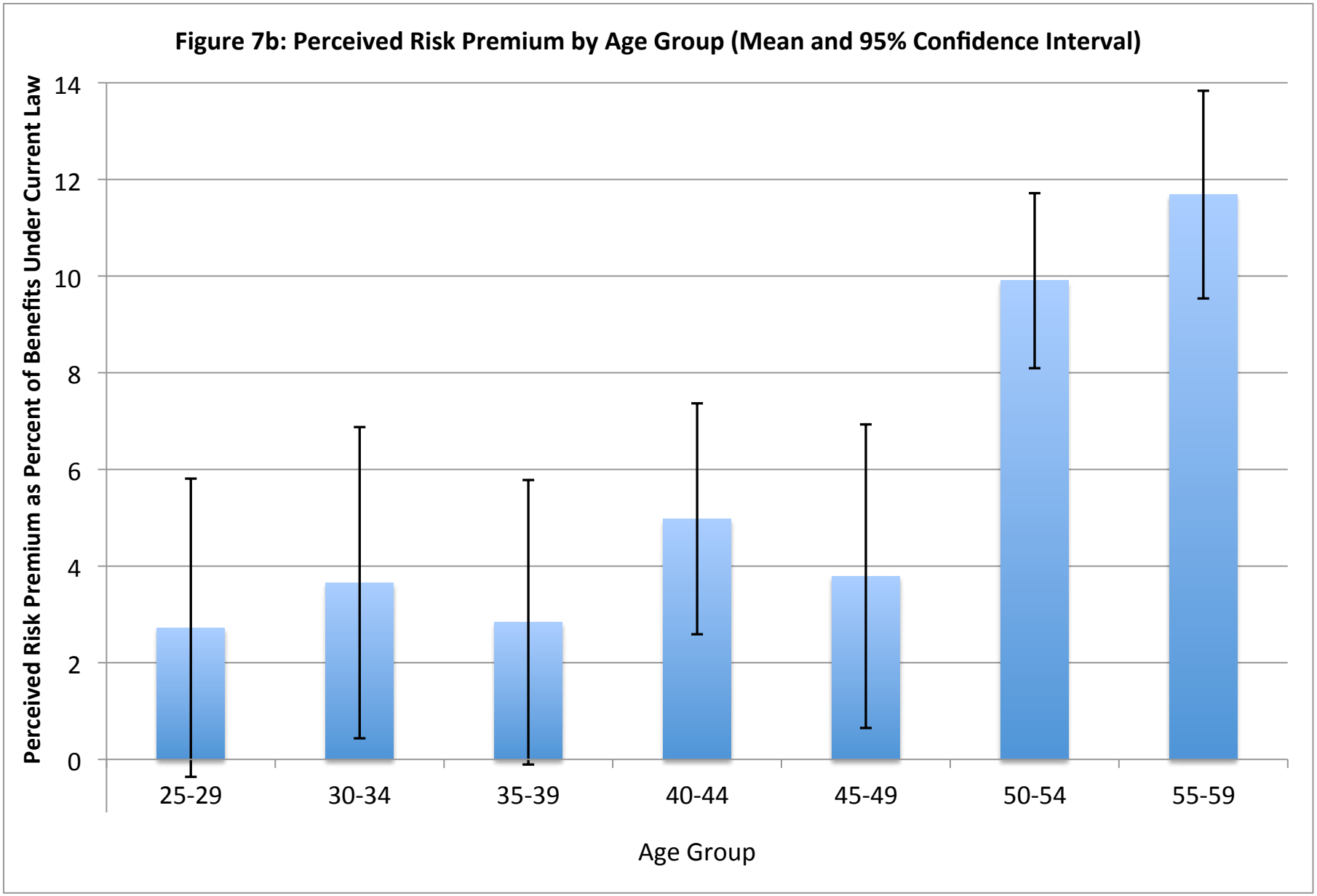
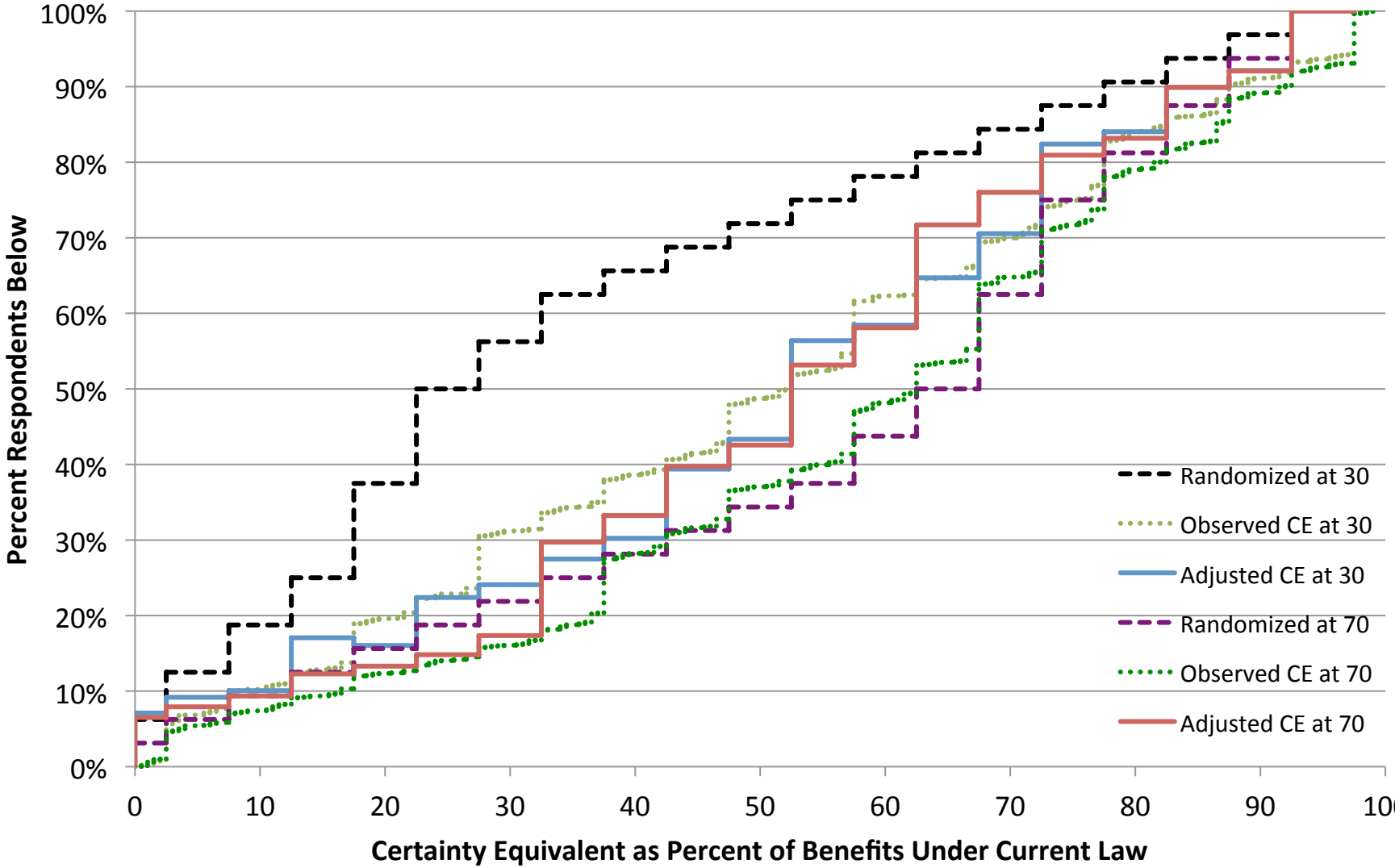


Figure 8: Predicted Certainty Equivalent (CE) for Randomizers, Observed CE, and Adjusted CE by Starting Value



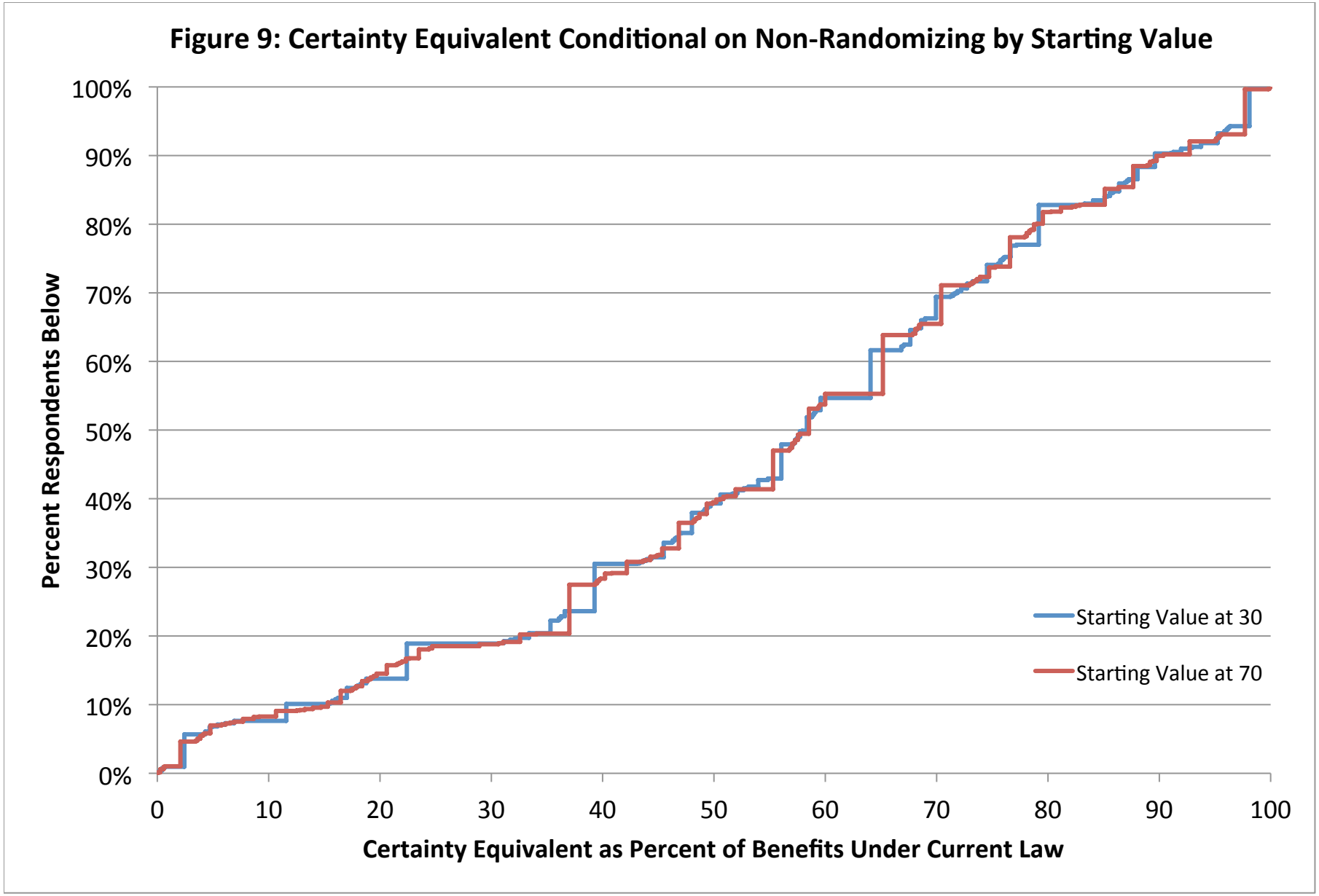
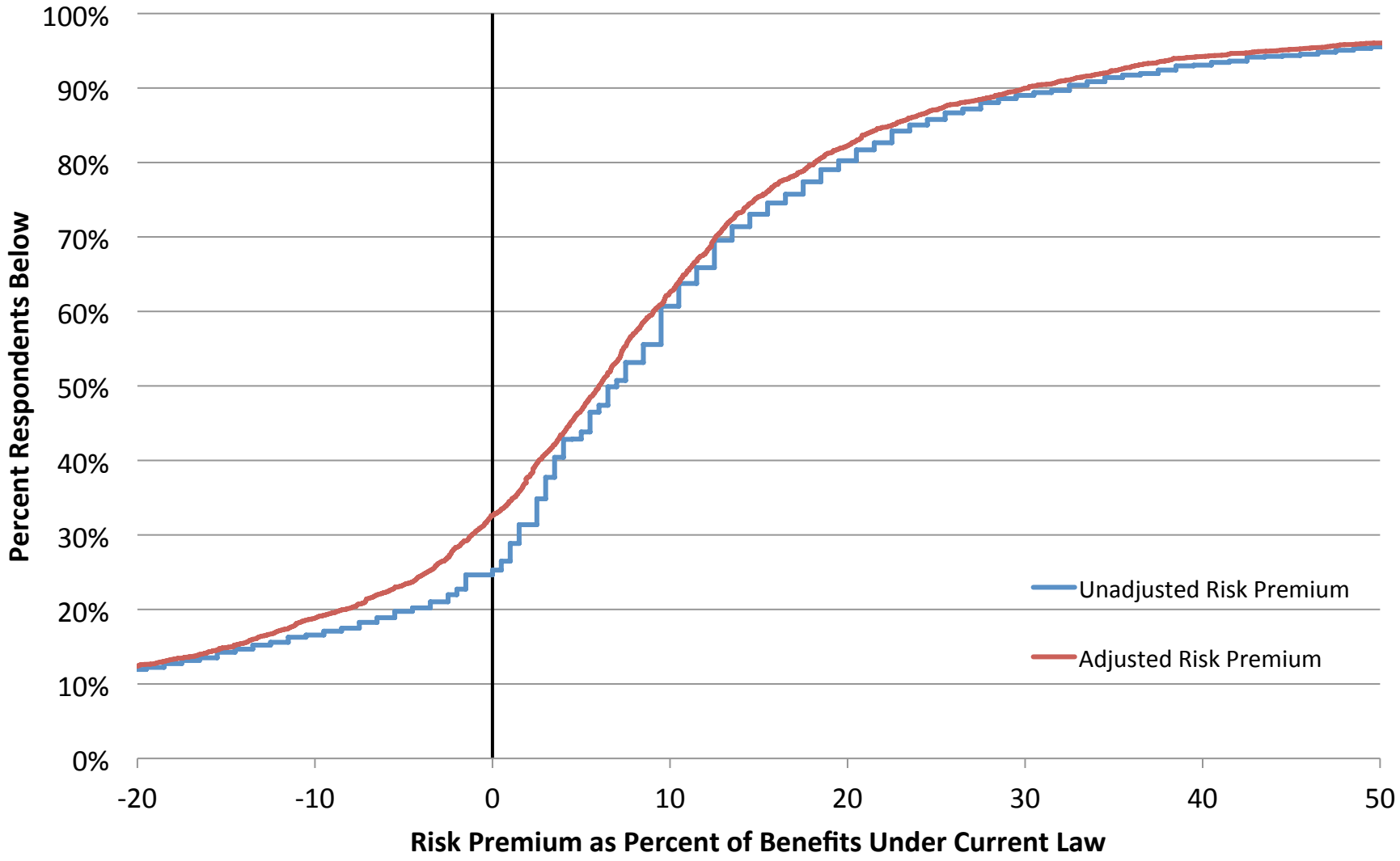


Figure 9: Certainty Equivalent Conditional on Non-Randomizing by Starting Value
Percent Respondents Below
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
10
20
30
40
50
60
70
80
90
100
Certainty Equivalent as Percent of Benefits Under Current Law
Starting Value at 30
Starting Value at 70

Figure 10: Adjusted and Unadjusted Risk Premia



Appendix Table A1: Demographic Variables

Variable	(1) 2010 Current Population Survey: Ages 25-59	(2) Knowledge Network Survey Respondents: Ages 25-59	(3)
	Mean	Mean	Difference with CPS
Age	42.03	42.49	0.452**
Age: 25-34	0.282	0.257	-0.025***
Age: 35-49	0.434	0.442	0.008
Age: 50-59	0.284	0.301	0.017**
Female	0.507	0.464	-0.042***
White	0.657	0.702	0.045***
Black	0.119	0.103	-0.016***
Hispanic	0.154	0.154	0.000
Other Race/Ethnicity	0.070	0.041	-0.029***
High School Dropout	0.111	0.088	-0.023***
High School	0.301	0.286	-0.015*
Some College	0.275	0.229	-0.046***
Bachelor's Degree or More	0.314	0.397	0.083***
Married	0.614	0.643	0.029***
Widowed	0.017	0.013	-0.004*
Divorced	0.118	0.076	-0.042***
Separated	0.030	0.018	-0.011***
Never Married	0.222	0.157	-0.065***
Living with Partner	..	0.092	
Region: Northeast	0.182	0.174	-0.008
Region: Midwest	0.216	0.237	0.021***
Region: South	0.367	0.354	-0.013
Region: West	0.236	0.235	-0.001
Household size of one	0.111	0.123	0.011*
Household size of two	0.284	0.305	0.020**
Household size of three	0.211	0.198	-0.013*
Household size of four	0.213	0.218	0.005
Household size of five or more	0.181	0.157	-0.024***
Household Income: Below 25k	0.152	0.141	-0.011*
Household Income: 25k-50k	0.214	0.229	0.015*
Household Income: 50k-75k	0.201	0.207	0.005
Household Income: 75k-100k	0.151	0.157	0.006
Household Income: Above 100k	0.282	0.267	-0.015*
Observations	64,286	3,053	

Notes: * significant at 10%, ** significant at 5% *** significant at 1%. Our sample consists of Knowledge Network panelists who completed our survey. To be eligible to take our survey, the respondent had to be between the ages of 25 and 59 and believe to be eligible for Social Security benefits under current law, either on his/her own earnings record or on the record of a spouse. Demographic characteristics are the values available in standard demographic profile variables at the time of the survey (June 2011). Knowledge Networks collects the standard demographic profile variables. CPS Data were collected in March 2010.

Table A2: Sample Comparisons on Confidence in Social Security

	(1) Very Confident	(2) Somewhat Confident	(3) Not too Confident	(4) Not at All Confident	(5) Mean Response	(6) N
Panel A : Entire Sample						
Greenwald et al. Phone Survey	10.5%	34.0%	36.3%	19.2%	2.36	983
	(1.0%)	(1.5%)	(1.5%)	(1.3%)	(0.01)	
Knowledge Networks Survey	3.2%	22.0%	45.5%	29.4%	1.99	2,932
	(0.3%)	(0.8%)	(0.9%)	(0.8%)	(0.01)	
P-Value of Difference	0.000	0.000	0.000	0.000	0.000	
Panel B: Females Only						
Greenwald et al. Phone Survey	9.1%	32.8%	39.5%	18.6%	2.32	516
	(1.3%)	(2.1%)	(2.2%)	(1.7%)	(0.02)	
Knowledge Networks Survey	3.6%	22.5%	46.9%	27.1%	2.03	1,348
	(0.5%)	(1.1%)	(1.4%)	(1.2%)	(0.02)	
P-Value of Difference	0.000	0.000	0.002	0.000	0.000	
Panel C: Males Only						
Greenwald et al. Phone Survey	12.0%	35.2%	32.8%	20.0%	2.39	466
	(1.5%)	(2.2%)	(2.2%)	(1.9%)	(0.02)	
Knowledge Networks Survey	2.8%	21.6%	44.3%	31.3%	1.96	1,584
	(0.4%)	(1.0%)	(1.2%)	(1.2%)	(0.02)	
P-Value of Difference	0.000	0.000	0.000	0.000	0.000	
Panel D: Ages 25-34						
Greenwald et al. Phone Survey	8.4%	21.9%	41.4%	28.3%	2.11	237
	(1.8%)	(2.7%)	(3.2%)	(2.9%)	(0.03)	
Knowledge Networks Survey	2.2%	13.7%	48.5%	35.6%	1.82	744
	(0.5%)	(1.3%)	(1.8%)	(1.8%)	(0.03)	
P-Value of Difference	0.000	0.003	0.026	0.016	0.000	
Panel E: Ages 35-49						
Greenwald et al. Phone Survey	8.7%	31.7%	41.0%	18.5%	2.31	378
	(1.5%)	(2.4%)	(2.5%)	(2.0%)	(0.02)	
Knowledge Networks Survey	3.0%	18.1%	44.8%	34.1%	1.90	1,308
	(0.5%)	(1.1%)	(1.4%)	(1.3%)	(0.02)	
P-Value of Difference	0.000	0.000	0.094	0.000	0.000	
Panel F: Ages 50-59						
Greenwald et al. Phone Survey	13.0%	46.0%	28.4%	12.6%	2.59	261
	(2.1%)	(3.1%)	(2.8%)	(2.1%)	(0.03)	
Knowledge Networks Survey	4.3%	34.8%	43.9%	17.0%	2.26	880
	(0.7%)	(1.6%)	(1.7%)	(1.3%)	(0.03)	
P-Value of Difference	0.000	0.001	0.000	0.034	0.000	

Notes: Standard errors in parentheses. Knowledge Networks Survey data are from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. Theissample is restricted to individuals between the ages of 25 and 59 as of May 2011 who answered both the ball/bins questions and the certainty equivalent questions. For details on the Greenwald et al. phone survey data see Greenwald et al. (2010). The phone survey was a random-digit dial telephone survey. The Greenwald sample reported here imposes our age restriction (ages 25-59) and was graciously cross-tabulated for our purposes by Greenwald et al.

Appendix Table A3: Correlates of Adjusted Risk Premia

	(1)		(2)		(3)		(4)	
	Dependent Variable: Adjusted Risk Premium		Dependent Variable: Adjusted Risk Premium		Dependent Variable: Difference Between Adjusted and Unadjusted Risk Premium		Dependent Variable: Difference Between Adjusted and Unadjusted Risk Premium	
Age	0.33***	(0.06)	0.31***	(0.06)	0.02**	(0.01)	0.02**	(0.01)
Black	10.2***	(2.0)	9.1***	(2.1)	-0.4	(0.3)	-0.5	(0.3)
Hispanic	5.6***	(1.7)	4.9***	(1.7)	0.1	(0.3)	0.0	(0.3)
Other	-3.9	(2.7)	-3.6	(2.7)	0.4	(0.4)	0.4	(0.4)
Highschool Dropout	2.9	(2.4)	3.4	(2.3)	0.0	(0.4)	0.1	(0.4)
Some College	-1.4	(1.4)	-1.5	(1.4)	0.1	(0.3)	0.1	(0.3)
Bachelor's Degree or Higher	-0.4	(1.3)	-1.0	(1.4)	-0.4	(0.2)	-0.5*	(0.3)
Ln Household Size	0.4	(1.5)	0.0	(1.5)	-0.2	(0.3)	-0.3	(0.3)
Ln Household Income	-1.7**	(0.8)	-1.9**	(0.9)	0.0	(0.1)	0.0	(0.1)
Widowed	5.7	(3.7)	5.0	(3.8)	-0.5	(0.9)	-0.6	(0.9)
Divorced	-0.3	(2.1)	-0.4	(2.1)	0.0	(0.4)	-0.1	(0.4)
Separated	7.2**	(3.3)	6.0*	(3.3)	-0.1	(0.7)	-0.2	(0.7)
Never Married	1.7	(1.7)	2.0	(1.7)	0.2	(0.3)	0.2	(0.3)
Lives With Partner	1.7	(2.1)	1.7	(2.1)	0.2	(0.3)	0.2	(0.3)
Female	2.1*	(1.0)	1.4*	(1.1)	-0.5**	(0.2)	-0.5***	(0.2)
Owns House	-2.3	(1.4)	-2.3	(1.4)	-0.4	(0.2)	-0.4	(0.2)
Lives in Northeast	-0.5	(1.4)	-0.9	(1.4)	0.1	(0.3)	0.2	(0.3)
Lives in Midwest	-0.8	(1.3)	-0.8	(1.3)	0.1	(0.2)	0.1	(0.2)
Lives in West	-2.3	(1.4)	-2.3	(1.4)	0.0	(0.2)	0.0	(0.2)
Lives in MSA	0.2	(1.5)	0.0	(1.5)	-0.1	(0.3)	-0.1	(0.3)
Kids in Household	-1.7	(1.5)	-1.1	(1.5)	0.0	(0.3)	0.0	(0.3)
Retired	10.3***	(3.3)	10.2***	(3.3)	-0.4	(0.6)	-0.3	(0.6)
Disabled	-5.1	(4.1)	-4.7	(4.1)	0.0	(0.6)	0.0	(0.6)
Unemployed	-1.0	(2.2)	-1.1	(2.1)	-0.4	(0.3)	-0.3	(0.3)
Not Working	2.0	(2.0)	1.8	(2.0)	-0.1	(0.4)	-0.1	(0.4)
Risk Preference			1.1***	(0.4)			0.2**	(0.1)
Subjective Probability of Surviving To Age 75			0.06**	(0.03)			0.001	(0.004)
Importance of SS to Retirement Spending			1.0	(0.6)			0.1	(0.1)
Trust in Elected Federal Officials			2.4***	(0.5)			0.1	(0.1)
Optimism Index			0.9*	(0.5)			0.2**	(0.1)
Financial Literacy			0.6	(0.6)			0.1	(0.1)
R^2	0.054		0.080		0.011		0.017	
N	2,939		2,939		2,939		2,939	
F-Statistic	5.89		5.60		1.24		1.42	
Prob>F (P-Value)	0.000		0.000		0.191		0.050	

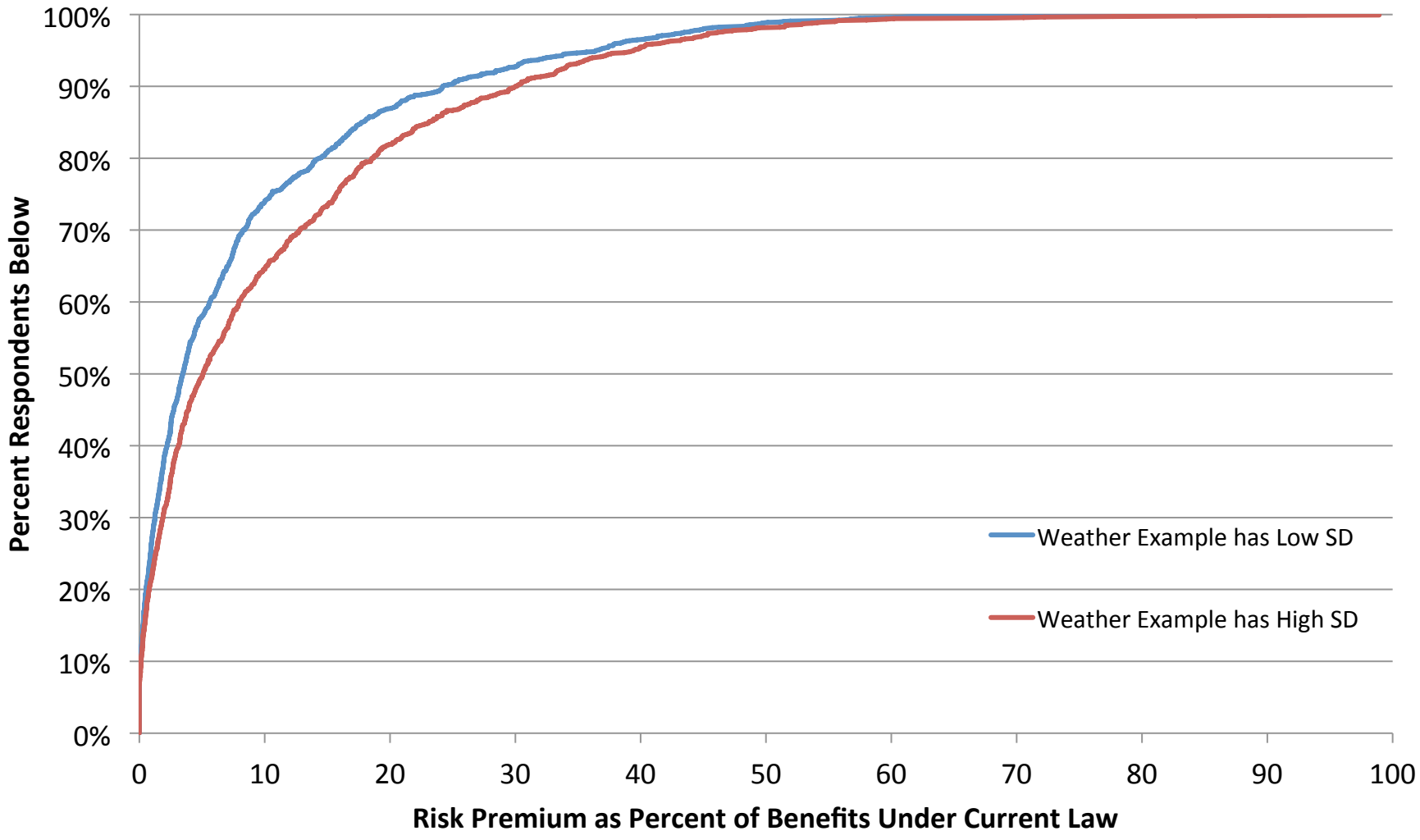
Notes: Robust standard errors in parentheses. * significant at 10%, ** significant at 5% *** significant at 1%. Missing values of explanatory values are dummied out. The risk premium is the percent of benefits under current law that respondents are willing to sacrifice in order to receive their expected benefits for with certainty. The simulated risk premium is based on the respondent's reported subjective distribution of own future Social Security benefits, the fraction of retirement spending covered by Social Security benefits, and an assumed CRRA utility function with a CRRA of 3. The adjustment filters out responses of respondents who are estimated to behave as if they are randomizing. See text for further details. Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011.

Appendix Table A4: Means and Medians of Risk Premia

Risk Premium Type	(1) Mean	(2) 25th Percentile	(3) Median	(4) 75th Percentile	(5) N
Self-Reported Risk Premium, Unadjusted					
Both Starting Values	5.8	0.0	7.0	16.5	2,939
	(0.5)	(0.5)	(0.3)	(0.4)	
Starting Value of 30%	9.6	1.5	8.5	18.5	1,465
	(0.7)	(0.3)	(0.5)	(0.7)	
Starting Value of 70%	2.0	-4.5	5.5	13.5	1,474
	(0.7)	(1.3)	(0.4)	(0.6)	
Self-Reported Risk Premium, Adjusted					
Both Starting Values	4.1	-3.7	6.0	14.8	2,939
	(0.5)	(0.6)	(0.3)	(0.5)	
Starting Value of 30%	4.3	-4.0	3.8	13.2	1,465
	(0.7)	(0.6)	(0.4)	(0.7)	
Starting Value of 70%	3.9	-3.1	7.7	15.9	1,474
	(0.7)	(1.3)	(0.4)	(0.7)	
Simulated Risk Premium, CRRA =3					
Both Weather Examples	9.4	1.0	4.0	13.5	2,960
	(0.2)	(0.1)	(0.2)	(0.6)	
Low SD Weather Example	8.4	0.9	3.4	10.5	1,540
	(0.3)	(0.1)	(0.2)	(0.7)	
High SD Weather Example	10.6	1.3	5.0	15.7	1,420
	(0.4)	(0.1)	(0.3)	(0.6)	
Simulated Risk Premium					
CRRA=3	9.4	1.0	4.0	13.5	2,960
	(0.2)	(0.1)	(0.2)	(0.6)	
CRRA=1	3.1	0.3	1.3	4.4	2,960
	(0.1)	(0.0)	(0.1)	(0.1)	
CRRA=5	13.8	1.7	6.6	20.5	2,960
	(0.3)	(0.1)	(0.3)	(0.8)	

Notes: Robust standard errors in parentheses. The risk premium is the percent of benefits under current law that respondents are willing to sacrifice in order to receive their expected benefits for with certainty. The simulated risk premium is based on the respondent's reported subjective distribution of own future Social Security benefits, the fraction of retirement spending covered by Social Security benefits, and an assumed CRRA utility function with a CRRA of 3. See text for further details. The weather example is an example of a probability distribution using the Bin/Ball format that was presented to the respondent prior to Q3.3. The variable Respondent Sees High SD Weather Example is a dummy that equals 1 if the variance of the distribution in the example was high. Data from the June 2011 Social Security Political Risk Survey, designed by the authors and fielded by Knowledge Networks. The sample is restricted to individuals between the ages of 25 and 59 as of May 2011.

Figure A1: Sensitivity of Simulated Risk Premium (CRRA=3) to Standard Deviation of Weather Example



APPENDIX B: Social Security Political Risk Survey Instrument

[SECTION 1: PRELIMINARIES]

[DISPLAY]

Q.1.1: [INTRO] Introduction

Hello, we are researchers at Dartmouth College who are interested in people's views of the future of Social Security. You have been selected by Knowledge Networks to take this survey. Some of the questions in this survey might be difficult to answer, or you might not have an exact answer in mind. That is perfectly okay! Even if you do not know the answer, we would appreciate your best guess. Thank you very much for your participation!

[SP]

Q.1.2: [SS_CONFIDENCE] Confidence in Social Security in general

How confident are you that the Social Security System will be able to provide you with the level of future benefits that you are supposed to get under current law?

(1) Very confident
(2) Somewhat confident
(3) Not too confident
(4) Not at all confident

[SP; PROMPT, TERMINATE IF SKIP AFTER PROMPT]

Q.1.2b: [SS_RECEIPT] Currently receiving Social Security

Do you currently receive Social Security benefits?

(1) Yes
(2) No

[IF SS_RECEIPT=1, THEN GO TO STANDARD CLOSE]

[CREATE A VARIABLE MRRG BASED ON PPMARIT.
MRRG=0 IF PPMARIT=5 OR 6 (NEVER MARRIED OR LIVING WITH PARTNER);
MRRG=1 IF PPMARIT=1 (MARRIED);
MRRG=2 IF PPMARIT=2, 3, OR 4 (WIDOWED, DIVORCED, OR SEPARATED).]

[SP; PROMPT, TERMINATE IF SKIP AFTER PROMPT]

Q.1.3: [ELGB] Does R think he will be eligible for Social Security benefits?

Under current law, workers become eligible for Social Security benefits by working and paying the Social Security payroll tax for a total of 10 years or more before they retire. Their spouses and former spouses are also eligible for benefits.

Under current law, are you or will you become eligible for Social Security benefits by the time you retire?

(1) Yes
(2) No

[SP;ASK Q.1.4 IF ELGB == 2, ELSE SKIP]

Q.1.4: [Y_NO_ELGB] Why R believes he will be ineligible for Social Security benefits
Why do you think you will not be eligible for Social Security benefits?
(1) My main job is not or was not covered by Social Security.
(2) I do not have or will not have a sufficient work history to receive Social Security benefits
(3) Other reason **[please give textbox]**_____

[SP; ASK IF (ELGB == 2 AND (MRRG == 1 OR MRRG == 2)]
[PROMPT, TERMINATE IF SKIP AFTER PROMPT]

Q.1.5: [SPS_ELGB] Prompt respondent who does not believe(s) he will get Social Security benefits to think about possible benefits from a past or current marriage.
Individuals who are not eligible for Social Security benefits based on their own work history often will be eligible to receive Social Security benefits based on the earnings of their spouse, late spouse, or ex-spouse. Do you think you will be eligible to receive Social Security benefits based on the past and expected future work history of your [**IF (MRRG == 1), display** "spouse" **ELSE IF (MRRG == 2) display** "prior spouse"]?
(1) Yes
(2) No

IF (SPS_ELBG == 2 OR (MRRG ==0 AND ELGB==2)), TERMINATE THE SURVEY IMMEDIATELY (GO TO STANDARD CLOSE)

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL: 1]
[INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

Q.1.6: [CHANCE_RAIN] Chance of rain example
Later in this survey, we would like to ask your opinion about how likely you think various events might be. When we ask such a question, we would like for you to respond with a number from 0 to 100, where '0' means that you think there is absolutely no chance, and '100' means that you think the event is absolutely sure to happen.

For example, no one can ever be sure about tomorrow's weather, but if you think that rain is very unlikely tomorrow, you might say that there is a 10 percent chance of rain. If you think there is a very good chance that it will rain tomorrow, you might say that there is an 80 percent chance of rain.

Let's try an example and start with the weather. What do you think are the chances that it will rain tomorrow?

0 |----------| 100
No Chance Absolutely Certain

[SECTION 2: PERCEPTIONS ABOUT EXPECTATIONS OF POLICY REPSONSE TO SOCIAL SECURITY SHORTFALLS]

[SP]

Q.2.1: [SHORTFALL_KNOW] Does the respondent know of SS shortfalls?

Do projections show that Social Security is facing a financial shortfall? A shortfall means that, in the future, Social Security is projected to pay more in benefits than it will have in the trust fund or receive in taxes.

(1) Yes
(2) No

[INSERT A NOBACK]

[SP]

Q.2.2: [SHORTFALL_FIX] How respondent thinks shortfalls will be fixed

Social Security is projected to face a long-term financial shortfall. To fix this, Social Security must either increase the amount of tax revenue it collects or decrease the amount of benefits it pays out. How do you think lawmakers will choose to fix this shortfall?

(1) They will fix the shortfall mostly or entirely through benefits cuts.
(2) They will fix the shortfall with a balanced mix of benefit cuts and tax increases.
(3) They will fix the shortfall mostly or entirely through tax increases.

[DISPLAY; SHOW ON A NEW SCREEN]

Under current law, the Social Security payroll tax rate is 12.4%, which is split evenly between the employer and the employee. Therefore, every time a worker is paid, Social Security taxes 6.2% of the worker's earnings, and the worker's employer pays an additional 6.2% of the worker's earnings to Social Security. This tax only applies to the first $106,800 of a worker's yearly pay. Earnings above $106,800 are not taxed.

[CREATE AND RANDOMLY SET A BINARY (0,1) VARIABLE, TEN_RET_ORDER]

[IF (TEN_RET_ORDER == 0), FIRST DISPLAY Q.2.3, THEN DISPLAY Q.2.4. ELSE, FIRST DISPLAY Q.2.4, THEN DISPLAY Q.2.3]

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL: 1]
[INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

Q.2.3: [PRT_RAISE_CHNC_10YR] Chance of payroll tax being raised in the next 10 years

What do you think is the percent chance that the Social Security payroll tax rate will be raised above 12.4% sometime within the next 10 years?

0 |----------| 100
No Chance Absolutely Certain

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL: 1]
[INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

[IF (AGE OF RESPONDENT == 55), SKIP Q.2.4]

Q.2.4: [PRT_RAISE_CHNC_RET] Chance of payroll tax being raised by age of 65
What do you think is the percent chance that the Social Security payroll tax rate will be raised above 12.4% by the time you turn 65?

0 |----------| 100
No Chance Absolutely Certain

[IF (TEN_RET_ORDER == 0), FIRST DISPLAY Q.2.5, THEN DISPLAY Q.2.6. ELSE, FIRST DISPLAY Q.2.6, THEN DISPLAY Q.2.5]

[NUMBER BOX; 0-50; PLEASE ALLOW TWO DECIMALS]
Q.2.5: [EXP_PRT_10YR] Expected payroll tax in 10 years
As we have mentioned, the Social Security payroll tax rate is 12.4% under current law. What do you expect the Social Security payroll tax rate to be in ten years?
____%

[NUMBER BOX; 0-50; PLEASE ALLOW TWO DECIMALS]
[IF (AGE OF RESPONDENT) == 55, SKIP Q.2.6]

Q.2.6: [EXP_PRT_RET] Expected payroll tax by age of 65
As we have mentioned, the Social Security payroll tax rate is 12.4% under current law. By the time you turn 65, what do you expect the Social Security payroll tax rate to be?
____%

[IF (TEN_RET_ORDER == 0), FIRST DISPLAY Q.2.7, THEN DISPLAY Q.2.8. ELSE, FIRST DISPLAY Q.2.8, THEN DISPLAY Q.2.7].

REGARDLESS OF ORDER, DISPLAY THE FOLLOWING PARAGRAPH ONLY ABOVE THE FIRST QUESTION.

As we have mentioned, the Social Security payroll tax is 12.4% under current law. This tax only applies to the first $106,800 of a worker's earnings. This amount is known as the Social Security taxable earnings limit and is automatically adjusted for inflation every year.

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL: 1]
[INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

Q.2.7: [PRTCAP_RAISE_CHNC_10YR] Expected payroll tax cap in 10 years
What do you think is the percent chance that lawmakers will raise the Social Security taxable earnings limit beyond the automatic adjustments for inflation sometime within the next 10 years?

0 |----------| 100
No Chance Absolutely Certain

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL: 1] [INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

[IF AGE OF RESPONDENT == 55, SKIP Q.2.8]

Q.2.8: [PRTCAP_RAISE_CHNC_RET] Expected payroll tax cap at age of 65
What do you think is the percent chance that lawmakers will raise the Social Security taxable earnings limit beyond the automatic adjustments for inflation by the time you turn 65?

0 |----------| 100
No Chance Absolutely Certain

[IF (TEN_RET_ORDER == 0), FIRST DISPLAY Q.2.9, THEN DISPLAY Q.2.10. ELSE, FIRST DISPLAY Q.2.10, THEN DISPLAY Q.2.9].

REGARDLESS OF ORDER, DISPLAY THE FOLLOWING PARAGRAPH ONLY ABOVE THE FIRST QUESTION.

As we have mentioned, Social Security is funded mainly through a payroll tax. These tax revenues, along with the existing trust fund, are used to fund current Social Security benefits. However, lawmakers could choose to fund Social Security using some new source of revenue.

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL: 1]
[INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

Q.2.9 [ALTREV_SRC_CHNC_10YR] Chance of a new revenue source in 10 years
What do you think is the percent chance that lawmakers will add a new source of revenue to fund Social Security within the next 10 years?

0 |----------| 100
No Chance Absolutely Certain

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL: 1]
[INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

[IF (AGE OF RESPONDENT == 55), SKIP Q.2.10]

Q.2.10: [ALTREV_SRC_CHNC_RET] Chance of a new revenue source in 10 years
What do you think is the percent chance that lawmakers will add a new source of revenue to fund Social Security by the time you turn 65?

0 |----------| 100
No Chance Absolutely Certain

[DISPLAY]

These next questions ask about what you think the general level of Social Security benefits will be. When answering these questions, please think of the Social Security benefits that everyone covered by Social Security will receive, not just the Social Security benefits you expect to receive.

[HORIZONTAL RATINGS THERMOMETER; RANGE: 0-100; INTERVAL: 1] [INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

[IF (TEN_RET_ORDER == 0), FIRST DISPLAY Q.2.11, THEN DISPLAY Q.2.12. ELSE, FIRST DISPLAY Q.2.12, THEN DISPLAY Q.2.11]

Q.2.11 [GENLVL_DCLN_CHNC_10YR] Chance of decline in general level of benefits in the next 10 years

Thinking of the Social Security program in general and not just your own Social Security benefits, what is the percent chance that lawmakers will change Social Security so that it becomes less generous sometime in the next 10 years?

0 |----------| 100
No Chance Absolutely Certain

[HORIZONTAL RATINGS THERMOMETER; RANGE: 0-100; INTERVAL: 1] [INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

[IF (AGE OF RESPONDENT == 55), SKIP Q.2.12]

Q.2.12: [GENLVL_DCLN_CHNC_RET] Chance of decline in general level of benefits at the age of 65

Thinking of the Social Security program in general and not just your own Social Security benefits, what is the percent chance that lawmakers will change Social Security so that it becomes less generous than now by the time you turn 65?

0 |----------| 100
No Chance Absolutely Certain

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL: 1]
[INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

Q.2.13: [OTHR_BNFT_CHNC] Chance of receiving benefits from other governmental program

If Social Security were to become less generous, what do you think is the percent chance that some other government program will provide regular benefits in place of the Social Security benefit reductions?

0 |----------| 100
No Chance Absolutely Certain

[SECTION 3: PERCEPTIONS ABOUT RESPONDENT'S OWN FUTURE SOCIAL SECURITY BENEFITS AND TAXES]

[DISPLAY]

You just finished answering questions about your perceptions of Social Security's benefits and taxes in general, with regard to the entire system. For the next questions, we would like you to think of the Social Security benefits you specifically expect to receive.

[SP]

Q.3.1: [BNFT_CHNG_EXP] If respondent expects more of less when he receives benefits

Thinking about the Social Security benefits you specifically expect to receive, do you think that, by the time you start receiving benefits, you will receive more than, the same as, or less than you are supposed to get under current law?

(1) More
(2) The same
(3) Less

[IF (BNFT_CHNG_EXP == 2) SET PRCT_BNFT_CHNG_EXP to 100 AND SKIP Q.3.2]

[HORIZONTAL RATINGS THERMOMETER; RANGE: SEE GRAPHS BELOW; INTERVAL: 1] [INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

Q.3.2: [PRCT_BNFT_CHNG_EXP]: Amount of benefit change expected

You answered that you think you will receive [**IF BNFT_CHNG_EXP = 1, display** "more." **Else IF BNFT_CHNG_EXP = 3 display** "less"] Social Security benefits than what you are supposed to get under current law. Please use the slider below to indicate how much you think your future Social Security benefits will be *as a percentage of the Social Security benefits you are supposed to get under current law.*

The farther you move the slider away from 100, the [**IF BNFT_CHNG_EXP = 1, display** "more." **Else, IF BNFT_CHNG_EXP = 3 display** "less"] you expect your future Social Security benefits will be compared to what you are supposed to get under current law.

[Display if BNFT_CHNG_EXP == 1]

100 |----------| 200+
Receive benefits you are supposed to get — Receive twice as much or more than you are supposed to get

[Display if BNFT_CHNG_EXP == 3]

0 |----------| 100
Receive nothing — Receive benefits you are supposed to get

[DISPLAY]

To help you answer some questions about your Social Security benefits, we will give you 20 balls that you can put in different bins, each bin representing possible outcomes. The more likely you think each

outcome is, the more balls you should put in that bin. To see how this works, an example is shown on the next screen.

[CREATE AND RANDOMLY SET A BINARY (0,1) VARIABLE, WIDE_NRW_EXMPL]

[NOTE TO KN PROGRAMMERS: We did this Bin/Ball format question previously in KN survey K2298 (SNO13460); you may wish to borrow and adapt the code used in that survey. See the attached figure for the graphic associated with the "bins and balls" question format. The graphic should be interactive (i.e. respondents should see the picture and be able to add/remove balls from each bin using +/- buttons that appear below each bin (one ball per click). Please also show a box with "balls remaining."]

[IF (WIDE_NRW_EXMPL == 0), DISPLAY BELOW]

This is an example that shows what we think the temperature will be in Boston at noon tomorrow. We don't know for sure how hot or cold it will get, but we have some guesses. The more likely we think that it will be a given temperature, the more balls we put in that bin.

We are sure that the temperature will not reach 70 °F (or higher) or drop to 54 °F (or lower) at noon, so we don't put any balls in those bins. We think that there is a 20 percent chance (4 out of 20) that it will be 55-59°F, so we put 4 out of 20 balls in that bin. We think that there is a 50 percent chance (10 out of 20) that it will be 60-64 °F, so we put 10 out of 20 balls in that bin. We think that there is a 30 percent chance (6 out of 20) that it will be 65-69 °F, so we put 6 out of 20 balls in that bin.

What do you think the temperature will be in Boston at noon tomorrow?

	oooo	oo oooo oooo	oo oooo					
54 or lower	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90 or higher
+-	+-	+-	+-	+-	+-	+-	+-	

[IF (WIDE_NRW_EXMPL == 1), DISPLAY BELOW]

This is an example that shows what we think the temperature will be in Boston at noon tomorrow. We don't know for sure how hot or cold it will get, but we have some guesses. The more likely we think that it will be a given temperature, the more balls we put in that bin.

We are sure that the temperature will not reach 90 °F (or higher) at noon, so we don't put any balls in that bin. We think that there is a 25 percent chance (5 out of 20) that it will be 65-69 °F, so we put 5 out of 20 balls in that bin. We think that there is a 15 percent chance (3 out of 20) that it will be 60-64 °F, so we put 3 out of 20 balls in that bin. We think that there is a 10 percent chance (2 out of 20) that the temperature will fall in each of the remaining bins, so we put 2 balls in each of the remaining bins.

What do you think the temperature will be in Boston at noon tomorrow?

oo	oo	ooo	o oooo	oo	oo	oo	oo	

54 or lower	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90 or higher
+-	+-	+-	+-	+-	+-	+-	+-	

Q.3.3: [NOTHING_BALLS, LESS_BALLS, SAME_BALLS, MORE_BALLS] Ball/bin distribution of above/below expectations

You have been given 20 balls to put in the following bins. Each bin describes a scenario that involves the Social Security benefits you are supposed to get. The more likely you think a bin is, the more balls you should put in that bin.

What do you think will happen to your Social Security benefits?

I will receive no benefits whatsoever	I will receive lower benefits than I am supposed to get under current law	I will receive the benefits that I am supposed to get under current law	I will receive higher benefits than I am supposed to get under current law
+-	+-	+-	+-

[IF LESS_BALLS == 0, SKIP Q.3.4. AND SET LESS_BIN1=0, LESS_BIN2=0, LESS_BIN3=0, LESS_BIN4=0, LESS_BIN5=0]

Q.3.4: [LESS_BIN1, LESS_BIN2, LESS_BIN3, LESS_BIN4, LESS_BIN5] Ball/bin distribution of future benefit decreases

[IF LESS_BALLS>1, DISPLAY:]

You put [**LESS_BALLS**] balls in the bin marked "I will receive less than I am supposed to get under current law". Please distribute those balls in the following bins. The more likely you think a bin is, the more balls you should put in that bin.

[IF LESS_BALLS==1, DISPLAY:]

You put 1 ball in the bin marked "I will receive less than I am supposed to get under current law". Please put that ball in the bin below that you think is most likely to occur.

[ALWAYS DISPLAY:]

What percentage of the Social Security benefits that you are supposed to get under current law do you think you will receive?

I will receive between 1%-19% of the benefits that I am supposed to get	I will receive between 20%-39% of the benefits that I am supposed to get under	I will receive between 40%-59% of the benefits that I am supposed to get under	I will receive between 60%-79% of the benefits that I am supposed to get under	I will receive between 80%-99% of the benefits that I am supposed to get under

under current law	current law	current law	current law	current law
+-	+-	+-	+-	+-

[IF MORE_BALLS == 0, SKIP Q.3.5. AND SET MORE_BIN1=0, MORE_BIN2=0, MORE_BIN3=0, MORE_BIN4=0, MORE_BIN5=0]

Q.3.5: [MORE_BIN1, MORE_BIN2, MORE_BIN3, MORE_BIN4, MORE_BIN5] Ball/bin distribution of future benefit increases

[IF MORE_BALLS>1, DISPLAY:]

You put [**MORE_BALLS**] balls in the bin marked "I will receive more than I am supposed to get under current law". Please distribute those balls in the following bins. The more likely you think a bin is, the more balls you should put in that bin.

[IF MORE_BALLS==1, DISPLAY:]

You put 1 ball in the bin marked "I will receive more than I am supposed to get under current law". Please put that ball in the bin below that you think is most likely to occur.

[ALWAYS DISPLAY:]

What percentage of the Social Security benefits that you are supposed to get under current law do you think you will receive?

I will receive between 101% 120% of the benefits that I am supposed to get under current law	I will receive between 121%-140% of the benefits that I am supposed to get under current law	I will receive between 141%-160% of the benefits that I am supposed to get under current law	I will receive between 161%-180% of the benefits that I am supposed to get under current law	I will receive more than 181% of the benefits that I am supposed to get under current law
+-	+-	+-	+-	+-

Q.3.6: [SUB_BIN1, SUB_BIN2, SUB_BIN3, SUB_BIN4, SUB_BIN5]

[SET LB=missing]
[IF LESS_BIN1 > 10, THEN SET LB=0 and SET NBALLS=LESS_BIN1]
[IF LESS_BIN2 > 10, THEN SET LB=20 and SET NBALLS=LESS_BIN2]
[IF LESS_BIN3 > 10, THEN SET LB=40 and SET NBALLS=LESS_BIN3]
[IF LESS_BIN4 > 10, THEN SET LB=60 and SET NBALLS=LESS_BIN4]
[IF LESS_BIN5 > 10, THEN SET LB=80 and SET NBALLS=LESS_BIN5]
[IF MORE_BIN1 > 10, THEN SET LB=101 and SET NBALLS=MORE_BIN1]
[IF MORE_BIN2 > 10, THEN SET LB=121 and SET NBALLS=MORE_BIN2]
[IF MORE_BIN3 > 10, THEN SET LB=141 and SET NBALLS=MORE_BIN3]
[IF MORE_BIN4 > 10, THEN SET LB=161 and SET NBALLS=MORE_BIN4]
[IF MORE_BIN5 > 10, THEN SET LB=181 and SET NBALLS=MORE_BIN5]

[IF LB≠missing, DISPLAY:]

You put [**NBALLS**] balls in the bin marked "I will receive between **[Max(1,LB)]**%-**[LB+19]**% of the benefits that I am supposed to get under current law". Please distribute those balls in the following bins. The more likely you think a bin is, the more balls you should put in that bin.

What percentage of the Social Security benefits that you are supposed to get under current law do you think you will receive?

I will receive between **[Max(1,LB)]**%- **[LB+3]**% of the benefits that I am supposed to get under current law	I will receive between **[LB+4]**%- **[LB+7]**% of the benefits that I am supposed to get under current law	I will receive between **[LB+8]**%- **[LB+11]**% of the benefits that I am supposed to get under current law	I will receive between **[LB+12]**%- **[LB+15]**% of the benefits that I am supposed to get under current law	I will receive between **[LB+16]**%- **[LB+19]**% of the benefits that I am supposed to get under current law
+-	+-	+-	+-	+-

Run this code below for ALL respondents even if Q.3.6 is skipped
[CREATE A NEW VARIABLE: BINBALL_BNFT_CHNG_EXP]

[SET BINBALL_BNFT_CHNG_EXP = [(LESS_BIN1*10 + LESS_BIN2*29.5 + LESS_BIN3*49.5 + LESS_BIN4*69.5 + LESS_BIN5*89.5 + SAME_BALLS*100 + MORE_BIN1*110.5 + MORE_BIN2*130.5 + MORE_BIN3*150.5 + MORE_BIN4*170.5 + MORE_BIN5*190.5)/20]

(Note to programmer: BINBALL_BNFT_CHNG_EXP should NOT be rounded to an integer yet)

[IF (NOTHING_BALLS + LESS_BIN1 + LESS_BIN2 + LESS_BIN3 + LESS_BIN4 + LESS_BIN5 + SAME_BALLS + MORE_BIN1 + MORE_BIN2 + MORE_BIN3 + MORE_BIN4 + MORE_BIN5) ≠ 20, THEN SET BINBALL_BNFT_CHNG_EXP TO MISSING]

[IF LB≠missing, THEN SET ADJ = SUB_BIN1*0.5*(Max(1,LB)+LB+3)/20
+ SUB_BIN2*(LB+5.5)/20
+ SUB_BIN3*(LB+9.5)/20
+ SUB_BIN4*(LB+13.5)/20
+ SUB_BIN5*(LB+17.5)/20
- NBALLS*0.5*(Max(1,LB)+LB+19)/20]

[IF LB≠missing AND BINBALL_BNFT_CHNG_EXP ≠ missing AND NBALLS==(SUB_BIN1 + SUB_BIN2 + SUB_BIN3 + SUB_BIN4 + SUB_BIN5), THEN REPLACE BINBALL_BNFT_CHNG_EXP = BINBALL_BNFT_CHNG_EXP + ADJ]

[ROUND BINBALL_BNFT_CHNG_EXP TO THE NEAREST WHOLE NUMBER]

[CREATE A NEW VARIABLE: NORISK]

[SET NORISK=0]
[IF NOTHING_BALLS==20, SET NORISK=1]
[IF SAME_BALLS==20, SET NORISK=1]
[IF MAXIMUM(SUB_BIN1, SUB_BIN2, SUB_BIN3, SUB_BIN4, SUB_BIN5)==20, SET NORISK=1]

[SECTION 4: PERCEIVED COSTS OF UNCERTAINTY]

[SP]
Q.4.1: [UNCRT_IMPT] Importance of uncertainty
How much does it matter to you that you do not know exactly how much you will get in Social Security benefits?
(1) Uncertainty matters very much.
(2) Uncertainty matters a fair amount.
(3) Uncertainty matters little.
(4) Uncertainty does not matter.

[CREATE AND RANDOMLY SET A BINARY (0,1) VARIABLE UNCRT_ORD MEANT TO TRACK IN WHICH ORDER THE OPTIONS IN 4.2 ARE PRESENTED.]

Note to programmers: Normally the randomization would be done inline, but the differences are so large that we have decided to write out two separate questions.

[GRID/SP]
Q.4.2: [UNCRT_BNFT_AMT_IMPT, UNCRT_BNFT_CHNG_IMPT, UNCRT_BNFT_OTHR_IMPT] Importance of various other factors contributing to benefit uncertainty

[DISPLAY IF UNCRT_ORD == 0]

You might be uncertain about your Social Security benefits for a variety of reasons. It is possible that Social Security could have a shortfall or program rules could be changed so that you do not receive what you are supposed to get under current law. Even if benefit levels are not changed, you might be uncertain about the Social Security benefits you are supposed to get under current law. Please show how much each of these issues matters to you below.

	Matters Very Much	Matters a Fair Amount	Matters Little	Does Not Matter
Uncertainty about possible changes to benefit levels				
Uncertainty about what you are supposed to get under current law				
Other (Please enter in text box below)				

Text box for other: _____

[DISPLAY IF UNCRT_ORD == 1]

You might be uncertain about your Social Security benefits for a variety of reasons. You might be uncertain about the Social Security benefits you are supposed to get under current law. Even if you know how much you are supposed to get under current law, it is possible that Social Security could have a shortfall or program rules could be changed so that you do not receive what you are supposed to get under current law. Please show how much each of these issues matters to you below.

	Matters Very Much	Matters a Fair Amount	Matters Little	Does Not Matter
Uncertainty about what you are supposed to get under current law				
Uncertainty about possible changes to benefit levels				
Other (Please enter in text box below)				

Text box for other: _____

[SP]
Q.4.3: [END, PR0, PR1, PR2, PR3, PR4, PR5, A1, A2, A3, A4, A5, L, U] Willingness to accept contract for certain amount and ultimate categorization

[SET END = 0]
[CREATE AND RANDOMLY SET A BINARY (1,2) VARIABLE PR0]

[THIS QUESTION WILL BE ASKED MUTLIPLE TIMES, CONTINUING AS LONG AS END = 0. THE WORDING FOR SUBSEQUENT QUESTIONS IS DIFFERENT FROM THE WORDING WHEN THE QUESTION IS ASKED THE FIRST TIME. PLEASE SEE THE SECTION BELOW THE FIRST QUESTION FOR THE SUBSEQUENT WORDING.]

[THE FIRST TIME RESPONDENT IS QUERIED, FILL IN THE PERCENTAGE WITH PR1 AND RECORD THE RESPONDENT'S ANSWER IN A1. THE SECOND TIME, FILL IN THE PERCENTAGE WITH PR2 AND RECORD THE ANSWER IN A2, ETC. A LOGIC PATTERN FOR VALUES OF PR# AND END IS SEEN BELOW.]

[Create and randomly set a binary (0,1) variable Q43_ORD to track in which order the two answer categories in Q.4.3 are presented. If Q43_ORD=1, the unbreakable contract is shown as the second option]

[CREATE NEW VARIABLE ALT_VERSION, and SET ALT_VERSION=0]
[IF NORISK=0 AND BINBALL_BNFT_CHNG_EXP≠missing, THEN SET ALT_VERSION=1]

[If ALT_VERSION==0, then display]
[PROMPT IF SKIPPED]

Imagine that you were offered a contract that guaranteed you a certain percent of the Social Security benefits you are supposed to get under current law. This contract is unbreakable and cannot be changed by anybody, even the United States government.

Would you rather have:

(1) Benefits as determined by an unbreakable contract that offers you [APPROPRIATE PR# INTERATION]% of the Social Security benefits you are supposed to get under current law

(2) Benefits as determined by Social Security when you claim benefits

[If ALT_VERSION==1, then display instead the following text the first time Q4.3 is asked:]

[PROMPT IF SKIPPED]

The way you put balls into various bins shows that you expect to receive **[BINBALL_BNFT_CHNG_EXP]**% of the Social Security benefits you are supposed to get under current law. It also shows that you could receive more or less than this **[BINBALL_BNFT_CHNG_EXP]**%. Let's call this distribution of possible benefits, as described by you using the bins and balls, your "uncertain benefits." So, your uncertain benefits are whatever level of benefits you get when you claim benefits.

Imagine a contract that instead guarantees you a certain percentage of the Social Security benefits you are supposed to get under current law. This is like having all 20 balls on this certain percentage. This contract is unbreakable and cannot be changed by anybody, even the United States government.

Would you rather have:

(1) Guaranteed benefits equal to [APPROPRIATE PR# INTERATION]% of the Social Security benefits you are supposed to get under current law

(2) Uncertain benefits around **[BINBALL_BNFT_CHNG_EXP]**% of the Social Security benefits you are supposed to get under current law

[ASK 4.3 FOR THE FIRST TIME USING PR1]

IF PR0 = 1, PR1 = 30
IF PR0 = 2, PR1 = 70

[NOTE TO PROGRAMMERS: If ALT_VERSION==0, SHOW BELOW WORDING FOR EVERY QUERY OF THE RESPONDENT AFTER THE FIRST]
[SP; PROMPT IF SKIPPED]

And how about the following choice? Would you rather have:

(1) Benefits as determined by an unbreakable contract that offers you [APPROPRIATE PR# INTERATION]% of the Social Security benefits you are supposed to get under current law

(2) Benefits as determined by Social Security when you claim benefits

[If ALT_VERSION==1, then display for the subsequent queries of Q4.3:]
[SP; PROMPT IF SKIPPED]

And how about the following choice? Would you rather have:

(1) Guaranteed benefits equal to [APPROPRIATE PR# INTERATION]% of the Social Security benefits you are supposed to get under current law

(2) Uncertain benefits around **[BINBALL_BNFT_CHNG_EXP]**% of the Social Security benefits you are supposed to get under current law

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[IF END = 0, ASK 4.3 FOR THE SECOND TIME USING PR2]

IF PR0 = 1 & A1 = 1, PR2 = 20
IF PR0 = 1 & A1 = 2, PR2 = 60

IF PR0 = 2 & A1 = 1, PR2 = 40
IF PR0 = 2 & A1 = 2, PR2 = 80

[IF END = 0, ASK 4.3 FOR THE THIRD TIME USING PR3]

IF PR0 = 1 & A1 = 1 & A2 = 1, PR3 = 10
IF PR0 = 1 & A1 = 1 & A2 = 2, PR3 = 25
IF PR0 = 1 & A1 = 2 & A2 = 1, PR3 = 40
IF PR0 = 1 & A1 = 2 & A2 = 2, PR3 = 80

IF PR0 = 2 & A1 = 1 & A2 = 1, PR3 = 20
IF PR0 = 2 & A1 = 1 & A2 = 2, PR3 = 60
IF PR0 = 2 & A1 = 2 & A2 = 1, PR3 = 75
IF PR0 = 2 & A1 = 2 & A2 = 2, PR3 = 90

[IF END = 0, ASK 4.3 FOR THE FOURTH TIME USING PR4]

IF PR0 = 1 & A1 = 1 & A2 = 1 & A3 = 1, PR4 = 05
IF PR0 = 1 & A1 = 1 & A2 = 1 & A3 = 2, PR4 = 15
IF PR0 = 1 & A1 = 1 & A2 = 2 & A3 = 1, SET **L = 20, U = 25, END = 1**
IF PR0 = 1 & A1 = 1 & A2 = 2 & A3 = 2, SET **L = 25, U = 30, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 1, PR4 = 35
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 2, PR4 = 50
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 1, PR4 = 70
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 2, PR4 = 90

IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 1, PR4 = 10
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 2, PR4 = 30
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 1, PR4 = 50
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 2, PR4 = 65
IF PR0 = 2 & A1 = 2 & A2 = 1 & A3 = 1, SET **L = 70, U = 75, END = 1**
IF PR0 = 2 & A1 = 2 & A2 = 1 & A3 = 2, SET **L = 75, U = 80, END = 1**
IF PR0 = 2 & A1 = 2 & A2 = 2 & A3 = 1, PR4 = 85
IF PR0 = 2 & A1 = 2 & A2 = 2 & A3 = 2, PR4 = 95

[IF END = 0, ASK 4.3 FOR THE FIFTH TIME USING PR5]

IF PR0 = 1 & A1 = 1 & A2 = 1 & A3 = 1 & A4 = 1, SET **L = 0, U = 5, END = 1**
IF PR0 = 1 & A1 = 1 & A2 = 1 & A3 = 1 & A4 = 2, SET **L = 5, U = 10, END = 1**
IF PR0 = 1 & A1 = 1 & A2 = 1 & A3 = 2 & A4 = 1, SET **L = 10, U = 15, END = 1**
IF PR0 = 1 & A1 = 1 & A2 = 1 & A3 = 2 & A4 = 2, SET **L = 15, U = 20, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 1 & A4 = 1, SET **L = 30, U = 35, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 1 & A4 = 2, SET **L = 35, U = 40, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 2 & A4 = 1, PR5 = 45
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 2 & A4 = 2, PR5 = 55
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 1 & A4 = 1, PR5 = 65
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 1 & A4 = 2, PR5 = 75
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 2 & A4 = 1, PR5 = 85
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 2 & A4 = 2, PR5 = 95

IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 1 & A4 = 1, PR5 = 5
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 1 & A4 = 2, PR5 = 15
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 2 & A4 = 1, PR5 = 25
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 2 & A4 = 2, PR5 = 35
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 1 & A4 = 1, PR5 = 45
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 1 & A4 = 2, PR5 = 55
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 2 & A4 = 1, SET **L = 60, U = 65, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 2 & A4 = 2, SET **L = 65, U = 70, END = 1**
IF PR0 = 2 & A1 = 2 & A2 = 2 & A3 = 1 & A4 = 1, SET **L = 80, U = 85, END = 1**
IF PR0 = 2 & A1 = 2 & A2 = 2 & A3 = 1 & A4 = 2, SET **L = 85, U = 90, END = 1**
IF PR0 = 2 & A1 = 2 & A2 = 2 & A3 = 2 & A4 = 1, SET **L = 90, U = 95, END = 1**
IF PR0 = 2 & A1 = 2 & A2 = 2 & A3 = 2 & A4 = 2, SET **L = 95, U = 100, END = 1**

[4.3 IS <u>NOT</u> REPEATED A SIXTH TIME. RATHER, SET VARIABLES L, U, AND END ACCORDING TO RESULTS OF THE FIFTH ITERATION]

IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 2 & A4 = 1 & A5 = 1, SET **L = 40, U = 45, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 2 & A4 = 1 & A5 = 2, SET **L = 45, U = 50, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 2 & A4 = 2 & A5 = 1, SET **L = 50, U = 55, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 1 & A3 = 2 & A4 = 2 & A5 = 2, SET **L = 55, U = 60, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 1 & A4 = 1 & A5 = 1, SET **L = 60, U = 65, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 1 & A4 = 1 & A5 = 2, SET **L = 65, U = 70, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 1 & A4 = 2 & A5 = 1, SET **L = 70, U = 75, END = 1**

IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 1 & A4 = 2 & A5 = 2, SET **L = 75, U = 80, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 2 & A4 = 1 & A5 = 1, SET **L = 80, U = 85, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 2 & A4 = 1 & A5 = 2, SET **L = 85, U = 90, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 2 & A4 = 2 & A5 = 1, SET **L = 90, U = 95, END = 1**
IF PR0 = 1 & A1 = 2 & A2 = 2 & A3 = 2 & A4 = 2 & A5 = 2, SET **L = 95, U = 100, END = 1**

IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 1 & A4 = 1 & A5 = 1, SET **L = 00, U = 05, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 1 & A4 = 1 & A5 = 2, SET **L = 05, U = 10, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 1 & A4 = 2 & A5 = 1, SET **L = 10, U = 15, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 1 & A4 = 2 & A5 = 2, SET **L = 15, U = 20, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 2 & A4 = 1 & A5 = 1, SET **L = 20, U = 25, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 2 & A4 = 1 & A5 = 2, SET **L = 25, U = 30, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 2 & A4 = 2 & A5 = 1, SET **L = 30, U = 35, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 1 & A3 = 2 & A4 = 2 & A5 = 2, SET **L = 35, U = 40, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 1 & A4 = 1 & A5 = 1, SET **L = 40, U = 45, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 1 & A4 = 1 & A5 = 2, SET **L = 45, U = 50, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 1 & A4 = 2 & A5 = 1, SET **L = 50, U = 55, END = 1**
IF PR0 = 2 & A1 = 1 & A2 = 2 & A3 = 1 & A4 = 2 & A5 = 2, SET **L = 55, U = 60, END = 1**

Q4.3b: [A6] Narrowing of guaranteed/uncertain benefits for certain respondents
[Order of the answer categories be determined by **Q43_ORD]**

[SP; PROMPT IF SKIPPED]

[SET FIN_PR=missing]
[If ALT_VERSION==1 AND (BINBALL_BNFT_CHNG_EXP-2) ≤ L AND L < BINBALL_BNFT_CHNG_EXP, THEN SET FIN_PR= BINBALL_BNFT_CHNG_EXP]
[If ALT_VERSION==1 AND (BINBALL_BNFT_CHNG_EXP-6) ≤ L AND L < (BINBALL_BNFT_CHNG_EXP-2), THEN SET FIN_PR= BINBALL_BNFT_CHNG_EXP-2]
[If ALT_VERSION==1 AND (BINBALL_BNFT_CHNG_EXP-11) ≤ L AND L < (BINBALL_BNFT_CHNG_EXP-6), THEN SET FIN_PR= L+3]

[IF FIN_PR≠missing, THEN DISPLAY:]

And how about the following choice? Would you rather have:

(1) Guaranteed benefits equal to [**FIN_PR**]% of the Social Security benefits you are supposed to get under current law

(2) Uncertain benefits around **[BINBALL_BNFT_CHNG_EXP]**% of the Social Security benefits you are supposed to get under current law

Q4.3c [REASON] Opportunity for respondent to give textual feedback if difference between willingness to accept uncertain vs. guaranteed benefits is very low

[INSERT A NOBACK]

[If ALT_VERSION==1 AND BINBALL_BNFT_CHNG_EXP < L-5 THEN DISPLAY:]
[OPEN-ENDED TEXT BOX]

We are interested in better understanding why you chose uncertain benefits around **[BINBALL_BNFT_CHNG_EXP]**% of the Social Security benefits you are supposed to get under current law over guaranteed benefits equal to [**L**]% of the Social Security benefits you are supposed to get under current law.

Could you tell us the main reason for your choice?

[CREATE AND RANDOMLY SET THREE BINARY (0,1) VARIABLES: INCDEC_4_4, RSLW_4_4, AND TXCP_4_4. THE RANDOMIZATIONS SHOULD BE INDEPENDENT]

Note to programmers: Normally the randomization would be done inline, but the differences are so large that we have decided to write out two separate questions (just as in 4.2)

[GRID/SP]

Q.4.4: [UNCRT_PRT_RATE_IMPT, UNCRT_PRT_CAP_IMPT, UNCRT_PRT_OTHER_IMPT]
Importance of various other factors contributing to tax uncertainty

[IF (TXCP_4_4 == 0) DISPLAY BELOW]

You might be uncertain about the taxes that fund Social Security for a variety of reasons. For example, you could be uncertain about whether the current Social Security payroll tax rate will be [**IF INCDEC_4_4 == 0, display** "raised or lowered" **else display** "lowered or raised"]. Additionally, you could be uncertain about whether the Social Security taxable earnings limit will be [**IF RSLW_4_4 == 0, display** "raised or lowered" **else display** "lowered or raised"] (other than automatic adjustments for inflation). Please show how much each of these issues matter to you below.

	Matters Very Much	Matters a Fair Amount	Matters Little	Does Not Matter
Uncertainty about the Social Security payroll tax rate				
Uncertainty about the Social Security taxable earnings limit				
Other (Please enter in text box below)				

Text box for other: _____

[IF (TXCP_4_4 == 1, DISPLAY BELOW)]

You might be uncertain about the taxes that fund Social Security for a variety of reasons. For example, you could be uncertain about whether the Social Security taxable earnings limit will be [**IF RSLW_4_4 == 0, display** "raised or lowered" **else display** "lowered or raised"] (other than automatic adjustments for inflation). Additionally, you could be uncertain about whether the current Social Security payroll tax rate will be [**IF INCDEC_4_4 == 0, display** "raised or lowered" **else display** "lowered or raised"]. Please show how much each of these issues matter to you below.

	Matters Very Much	Matters a Fair Amount	Matters Little	Does Not Matter
Uncertainty about the Social Security taxable earnings limit				

Uncertainty about the Social Security payroll tax rate				
Other (Please enter in text box below)				

Text box for other: _____

[SECTION 5: SELF-REPORTED RESPONSES TO UNCERTAINTY IN SOCIAL SECURITY BENEFITS]

[CREATE AND RANDOMLY SET A BINARY (0,1) VARIABLE PRCNT_ORD_51]

[IF (PRCNT_ORD_51 == 0, SET PRCNT_OFFRD_51 = BINBALL_BNFT_CHNG_EXP]

[IF PRCNT_ORD_51 == 1, SET PRCNT_OFFRD_51 = 100]

[IF PRCNT_OFFRD_51 == MISSING, SET PRCNT_OFFRD_51= PRCT_BNFT_CHNG_EXP]
[IF PRCNT_OFFRD_51 == MISSING, SET PRCNT_OFFRD_51=75]
[GRID/SP]

Q.5.1: [UNCRT_RSPN_SVNG, UNCRT_RSPN_CLMAGE, UNCRT_RSPN_WRKAGE, UNCRT_RSPN_RTRMSPND, UNCRT_RSPN_PRE_RTRMWRK, UNCRT_RSPN_WILL]

[IF BINBALL_BNFT_CHNG_EXP≠ missing, THEN DISPLAY:]
The way you put balls into various bins shows that you currently expect to receive **[BINBALL_BNFT_CHNG_EXP]**% of the Social Security benefits you are supposed to get under current law. **[IF BINBALL_BNFT_CHNG_EXP≠ missing AND NORISK=0, THEN DISPLAY IN THE SAME PARAGRAPH]** It also shows that you think you could receive more or less than this **[BINBALL_BNFT_CHNG_EXP]**%.

[ALWAYS DISPLAY:]
Suppose that all of the uncertainty about possible changes to benefit levels is eliminated: you receive an unbreakable contract that guarantees you [**PRCNT_OFFRD_51**]% of the Social Security benefits you are supposed to get under current law. Unbreakable means that this contract cannot be changed by anybody, even the United States government.

How would your behavior change with your benefits guaranteed at this level? Would your …

	Significantly Decrease	Somewhat Decrease	No Change	Somewhat Increase	Significantly Increase
Saving before retirement					
Hours worked per year before retirement					
Spending during retirement					
Age when you stop working for pay					

Age when you start claiming Social Security Benefits					
Assets you leave to others					

[PLEASE MAKE SURE THE VARIABLE NAMES IN THE GRID CORRESPOND TO THE QUESTION ASKED AS FOLLOWS:]

Saving before retirement	UNCRT_RSPN_SVNG
Hours worked per year before retirement	UNCRT_RSPN_PRE_RTRMWRK
Spending during retirement	UNCRT_RSPN_RTRMSPND
Age when you stop working for pay	UNCRT_RSPN_WRKAGE
Age when you start claiming Social Security Benefits	UNCRT_RSPN_CLMAGE
Assets you leave to others	UNCRT_RSPN_WILL

[SECTION 6: RESPONDENT CHARACTERISTICS]

[SP]
Q.6.1: [JOB_GMBL1] Measures aversion to risk using lifetime-income gambles
Suppose that you are the only income earner in the family. Your doctor recommends that you move because of allergies, and you have to choose between two possible jobs.

The first would guarantee your current total family income for life.

The second is possibly better paying, but the income is also less certain. There is a 50–50 chance the second job would double your total lifetime income and a 50–50 chance that it would cut it by a third.

Which job would you take—the first job or the second job?
(1) The first job
(2) The second job

[SP]
[ASK ONLY IF (JOB_GMBL1 == 2)]
Q.6.2: [JOB_GMBL2] Measures aversion to risk using lifetime-income gambles

Thinking of the same scenario, what about these two jobs?

The first would guarantee your current total family income for life.

There is a 50–50 chance the second job would double your family income, and a 50–50 chance that it would cut it in half.

Which job would you take—the first job or the second job?
(1) The first job
(2) The second job

[SP]

[ASK ONLY IF (JOB_GMBL1 == 1)]

Q.6.3: [JOB_GMBL3] Measures aversion to risk using lifetime-income gambles

Thinking of the same scenario, what about these two jobs?

The first would guarantee your current total family income for life.

There is a 50–50 chance the second job would double your family income, and a 50–50 chance that it would cut it by 20 percent.

Which job would you take—the first job or the second job?
(1) The first job
(2) The second job

[SP]
[ASK ONLY IF (JOB_GMBL2 == 2)]

Q.6.4: [JOB_GMBL4] Measures aversion to risk using lifetime-income gambles

Thinking of the same scenario, what about these two jobs?

The first would guarantee your current total family income for life.

There is a 50–50 chance the second job would double your family income, and a 50–50 chance that it would cut it by 66 percent.

Which job would you take—the first job or the second job?
(1) The first job
(2) The second job

[SP]
[ASK ONLY IF (JOB_GMBL3 == 1)]

Q.6.5: [JOB_GMBL5] Measures aversion to risk using lifetime-income gambles

Thinking of the same scenario, what about these two jobs?

The first would guarantee your current total family income for life.

There is a 50–50 chance the second job would double your family income, and a 50–50 chance that it would cut it by 10 percent.

Which job would you take—the first job or the second job?
(1) The first job
(2) The second job

[CREATE AND RANDOMLY INTIALIZE A BINARY (0,1) VARIABLE WRKSTP_ORD]
[NUMBER BOX; RANGE: 0-120]

Q.6.6: [WRKSTP_AGE, NEVER_WORKED] (Expected) age of retirement, or lack of working history

At what age **[IF (WRKSTP_ORD == 0) DISPLAY** "did you stop working for pay or do you plan to stop working for pay?" **ELSE DISPLAY** "do you plan to stop working for pay or did you stop working for pay?"**]**

____ [**RANGE 0 … 120**]

☐ I never worked for pay **[SP]**

[Create a variable [NEVER_WORKED] that records whether people check the box "I never worked for pay"]

[NUMBER BOX; RANGE: 60-99]
Q.6.7: [CLCT_AGE_EXP] Expected age of benefit collection
At what age do you plan to start collecting Social Security benefits?

____ [RANGE 60…99]

[NUMBER BOX; RANGE: 0-6000]
SET CLAIM_AGE2=CLAIM_AGE
IF CLAIM_AGE2<62 OR CLAIM_AGE2=MISSING, SET CLAIM_AGE2=62

Q.6.8: [BNFT_EXPT] Expected level of benefits

In this question, we would like get your estimate of the Social Security benefits you are supposed to get under current law if you claim benefits at age [CLAIM_AGE2].

Even if you do not know exactly, please give your best guess.

(Please report any Social Security benefits paid to you yourself, not Social Security benefits paid to any other member in your household. Also, please give your answer in today's dollars, and ignore any inflation that may occur between today and when you collect Social Security benefits)

I believe the Social Security benefits I am supposed to get are roughly $_____ **[NUMBER BOX WITH RANGE 0-6000]** per month if I claim benefits at age [CLAIM_AGE2].

[HORIZONTAL RATINGS THERMOMETER; RANGE:0-100; INTERVAL:1] [INCLUDING A NUMBER BOX NEXT TO THE SLIDER]

Q.6.9: [LNGVTY_EXP] Longevity expectations by estimating chances of surviving to age 75

On a scale from 0 to 100, where 0 is no chance and 100 is absolutely certain, what is the percent chance that you will live to age 75 or older?

0 |----------| 100
No Chance Absolutely Certain

[SP]
Q.6.10: [BNFT_PCNT_RTRMTSPND] How important is Social Security to retirement spending?
Roughly, how important will the income that you are supposed to get from Social Security be relative to income from pensions, savings or other sources to pay for your household's spending during retirement?

(Please include in your answer any Social Security income that you or other members in your household are supposed to get from Social Security).

(1) Extremely important: Social Security would pay for more than 75% of spending
(2) Very important: Social Security would pay for 50% to 75% of spending
(3) Important: Social Security would pay for 25% to 50% of spending
(4) Not so important: Social Security would pay for less than 25% of spending

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[SP]
Q.6.11: [PLCTCL_TRST] Level of trust in the political system

How much do you agree with the following statement? *Most elected federal officials are trustworthy.*

Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree

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[GRID/SP]
Q.6.12: [OPTIMISM1, OPTIMISM2, OPTIMISM3, OPTIMISM4, OPTIMISM5, OPTIMISM6] Respondent's general level of optimism/pessimism
How much do you agree or disagree with the following statements?

Question	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
If something can go wrong for me, it will.					

I am always optimistic about my future.					
In uncertain times, I usually expect the best.					
Overall, I expect more good things to happen to me than bad.					
I hardly ever expect things to go my way.					
I rarely count on good things happening to me.					

[DISPLAY]
Next, we would like to ask you some questions to find out how people use numbers in everyday life and how they make decisions involving money.

[NUMBER BOX; 0-2,000,000; PLEASE ADD COMMA FOR THE NUMBER]
Q.6.13: [FINLIT_LOTRY] Financial Literacy 1 – Lottery test
If 5 people all have the winning numbers in the lottery and the prize is two million dollars, how much will each of them get?
$_____

[SP]
Q.6.14: [FINLIT_CMPND] Financial Literacy 2 – Compound Interest
Suppose you had $100 in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have in this account in total?
(1) More than $200
(2) Exactly $200
(3) Less than $200
(4) I don't know.

[SP]
Q.6.15: [FINLIT_INFLAT] Financial Literacy 3 – Inflation / Money Illusion
Suppose that in the year 2020, your after-tax income has doubled and prices of all goods have doubled too. In 2020, how much will you be able to buy with your income?
(1) More than today
(2) The same as today
(3) Less than today
(4) I don't know.

[SP]
Q.6.16: [FINLIT_MUTUAL] Financial Literacy 5 – Advanced Knowledge: Mutual Funds

True or false? Buying a company stock usually provides a safer return than a stock mutual fund.
(1) True
(2) False
(3) I don’t know.