Do households have a good sense of their retirement preparedness?

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By Alicia H. Munnell, Wenliang Hou, and Geoffrey T. Sanzenbacher*

Introduction

The National Retirement Risk Index (NRRI) measures the percentage of working-age households who are at risk of being financially unprepared for retirement. The calculations show that even if households work to age 65 and annuitize all their financial assets, including the receipts from reverse mortgages on their homes, 52 percent will be at risk of being unable to maintain their standard of living in retirement.

This *brief* examines whether households have a good sense of their own retirement preparedness — do their retirement expectations match the reality they face? Do people at risk know they are at risk? Have perceptions changed before and after the financial crisis?

The discussion proceeds as follows. The first section summarizes the NRRI. The second section compares households' self-assessed preparedness – at an aggregate level – to the objective measure provided by the NRRI in 2004 and 2013. The third section moves from the aggregate to individual households to determine the share of households with and without accurate perceptions. The fourth section identifies the characteristics of the households with inaccurate perceptions – those that are either "too worried" or "not worried enough." The final section concludes that, on a household-by-household basis, almost 60 percent of self-assessments agree with the NRRI predictions and that the 40 percent of households that get it wrong do so for predictable reasons. The question remains, however, whether unprepared households that recognize their situation are any more likely to take corrective action than those that do not.

The NRRI

The NRRI is based on the Federal Reserve's *Survey of Consumer Finances* (SCF), a triennial survey of a nationally representative sample of U.S. households. The Index calculates for each household in the SCF a replacement rate – projected retirement income as a percentage of pre-retirement earnings – and compares that replacement rate with a target replacement rate derived from a life-cycle consumption smoothing model. Those who fail to come within 10 percent of the target are defined as "at risk," and the Index reports the percentage of all households at risk.

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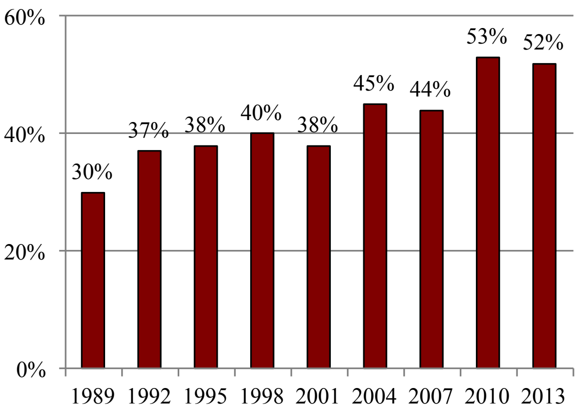
The most recent results show that 52 percent of working-age households in 2013 are at risk of being unable to maintain their standard of living in retirement. A comparison with earlier years shows that the situation has become more serious over time (see Figure 1).

Figure 1. The National Retirement Risk Index, 1989-2013



Source: Munnell, Hou, and Webb (2014).

This pattern of increasing risk reflects the changing retirement landscape.[1] The length of retirement is increasing as the average retirement age hovers at 63 while life expectancy continues to rise.[2] At the same time, replacement rates are falling for a number of reasons. First, at any given retirement age, Social Security benefits will replace a smaller fraction of pre-retirement earnings as the Full Retirement Age rises from 65 to 67 and Medicare premiums take a larger chunk. Second, while the share of the workforce covered by a pension has not changed over the last quarter of a century, coverage has shifted from defined benefit plans to 401(k) plans. In theory, 401(k) plans could provide adequate retirement income. But individuals make mistakes at every step along the way, and the median 401(k)/IRA balance for household heads approaching retirement in 2013 was only $111,000.[3] Finally, interest rates have declined dramatically, which means that households receive much less income from their accumulated wealth.

Aggregate Self-Assessment

The NRRI shows that more than half of households are at risk in retirement. One way to gauge whether the Index is capturing an accurate picture of the situation is to compare it to households' own perceptions of their retirement preparedness.

The SCF, which is used to construct the NRRI, asks each household to rate the adequacy of its anticipated combined retirement income from traditional sources: Social Security and employer pensions. The question's response scale is from one to five, with one being "totally inadequate," three being "enough to maintain living standards," and five being "very satisfactory." Thus, any household that answers one or two considers itself to be at risk.

The self-assessment of retirement preparedness in both 2004 (before the financial crisis) and 2013 (the most recent year of SCF data) is relatively consistent with the NRRI calculations (see Table 1 for results by income and Table 2 for results by age). This finding lends support to the notion that the NRRI is accurately detecting a widespread problem. In fact, the

Table 1. Percentage "At Risk" in NRRI versus Self-Reported "At Risk" by Income, 2004 and 2013

Income group	At risk, 2004		At risk, 2013	
	Self-reported	NRRI	Self-reported	NRRI
Low	58%	54%	62%	60%
Middle	46	41	58	52
High	41	36	51	43
All	48	44	57	52

Source: Authors' calculations and 2004, 2013 SCF.

Table 2. Percentage "At Risk" in NRRI versus Self-Reported "At Risk" by Age, 2004 and 2013

Age group	At risk, 2004		At risk, 2013	
	Self-reported	NRRI	Self-reported	NRRI
30-39	51%	48%	59%	59%
40-49	50	44	57	52
50-59	44	35	55	45
All	48	44	57	52

Source: Authors' calculations and 2004, 2013 SCF.

percentage of households that self-report being at risk is a bit higher than the NRRI. The difference might be due to two factors. First, NRRI households are not considered at risk if their replacement rate is within 10 percent of their target – the replacement rate needed to maintain their standard-of-living – whereas no such cushion exists for the self-reported responses. Second, the SCF does not prompt people to consider their housing wealth, while the NRRI assumes households will tap this wealth through a reverse mortgage.

In terms of patterns by group, lower-income and younger households are more likely to be at risk. Interestingly, high-income and older households have the greatest gap between self-reported and NRRI percentages at risk. Nevertheless, despite shortcomings in financial knowledge as reported in the literature, households in the aggregate seem to have a good "gut sense" of their financial situation.[4]

Household Self-Assessments vs. the NRRI

Even if aggregate perceptions match the NRRI, it does not mean that individual households have a correct assessment. For example, all of the individual households could get it wrong, but their errors could offset each other – i.e., half of households could incorrectly think they are at risk while the other half incorrectly think they are not at risk. Thus, the following exercise examines how well individual households perceive their retirement risk by matching their self-reported status to their NRRI results in 2004 and 2013.

Quadrants I and IV in Tables 3 and 4 show the households whose self-assessment agrees with the NRRI – they report not having enough to maintain living standards and the NRRI says they are at risk, or they report being adequately prepared and the NRRI says they are not at risk. In both years, 57 percent of households appear to have realistic expectations about how they will fare in retirement.[5] The consistency of these results is surprising given that the SCF survey is not longitudinal, so the interview responses in the two time periods do not come from the same households. The only difference between the 2004 and 2013 results is that, as conditions deteriorated after the financial crisis, 8 percent of households moved from a correct assessment that they were not at risk (Quadrant IV) to a correct assessment that they were at risk (Quadrant I).

Quadrant II shows households that appear to be overly concerned – they report being inadequately prepared but the NRRI says that they are not at risk. Twenty-four percent of the households fall into this category in both 2004 and 2013. Quadrant III shows that only 19 percent of households in both years seem to be less worried than they should be. That is, they report having enough resources to maintain living standards when the NRRI says they are at risk. Overall, then, 43 percent of households in 2013 (24 percent + 19 percent) do not have a good sense of their preparedness.[6] And, among this group, a larger share is too pessimistic rather than too optimistic.

Table 3. Households "At Risk" and "Not at Risk," NRRI and Individual Perceptions, 2004

Household response	NRRI	
	At risk	Not at risk
At risk	25% (Quadrant I)	24% (Quadrant II)
Not at risk	19% (Quadrant III)	32% (Quadrant IV)

Source: Authors' calculations and 2004 SCF.

Table 4. Households "At Risk" and "Not at Risk," NRRI and Individual Perceptions, 2013

Household response	NRRI	
	At risk	Not at risk
At risk	33% (Quadrant I)	24% (Quadrant II)
Not at risk	19% (Quadrant III)	24% (Quadrant IV)

Source: Authors' calculations and SCF 2013.

What Explains Misperceptions?

The question is what characteristics cause a household to be "too worried" or "not worried enough," as opposed to getting it right. The analysis uses a multinomial logit regression to explain the probability of households ending up in one category or another.[7] The explanatory variables include: risk aversion, home ownership, type of retirement plan, education, household type, and income and age group. The intuition for selecting each variable is explained below.

- *Risk aversion*. If a household is not willing to take any financial risk, it is classified as risk averse. One would expect that a risk-averse household is more likely to end up as "too worried," and less likely to end up as "not worried enough."

- *Own house*. One would expect that owning a house would increase the likelihood of being in the "too worried" group and reduce the likelihood of not being worried enough, because most households do not plan to tap their home equity to support general consumption in retirement.

- *Have defined benefit plan*. A household with the prospect of a guaranteed lifetime income is probably going to be secure in retirement. Thus, households with a defined benefit plan should be less likely to be "not worried enough" and more likely to be "too worried."

- *Have a defined contribution plan*. The danger with defined contribution plans is "wealth illusion." That is, $100,000 looks like a lot of money to many people even though it provides only about $400 per month in retirement income. Therefore, having a defined contribution plan would be expected to increase the probability of being "not worried enough" and have little effect on the likelihood of being "too worried."

- *College degree*. Education increases a household's time horizon and, thus, the probability of thinking ahead about well-being in retirement. Hence, having a college degree would increase the probability of falling into the "too worried" group and reduce the probability of being in the "not worried enough" group.

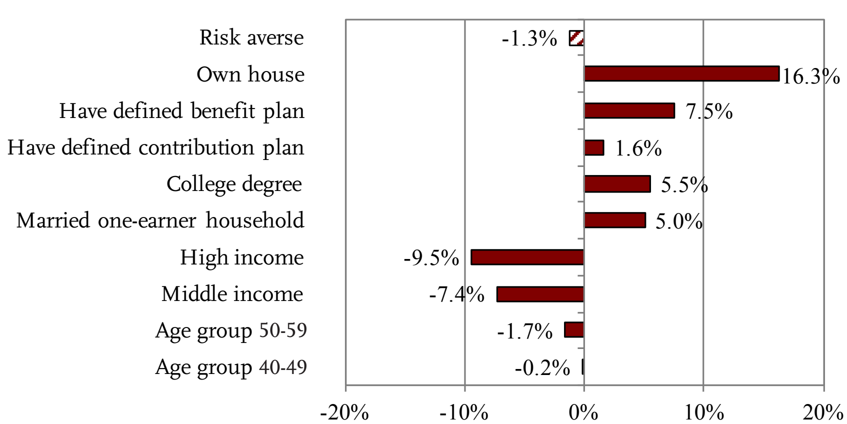
- *Household type*. Social Security provides a spouse's benefit equal to 50 percent of the benefit of the higher-earning spouse, and couples may not be aware of it before they claim benefits. Thus, one would expect that being a married one-earner household – compared to other household types – would increase the probability of being in the "too worried" group and reduce the probability of being in the "not worried enough" group.

- *Income group*. High-income households receive lower replacement rates from Social Security and must save more on their own. If they underestimate this challenge, they may be "not worried enough." In contrast, Social Security provides predictable income and a relatively high level of replacement for low-income households, so this group is less likely to misperceive their financial circumstances.

- *Age*. Households that are closer to retirement may better understand their situation, making them less likely to be either "too worried" or "not worried enough."

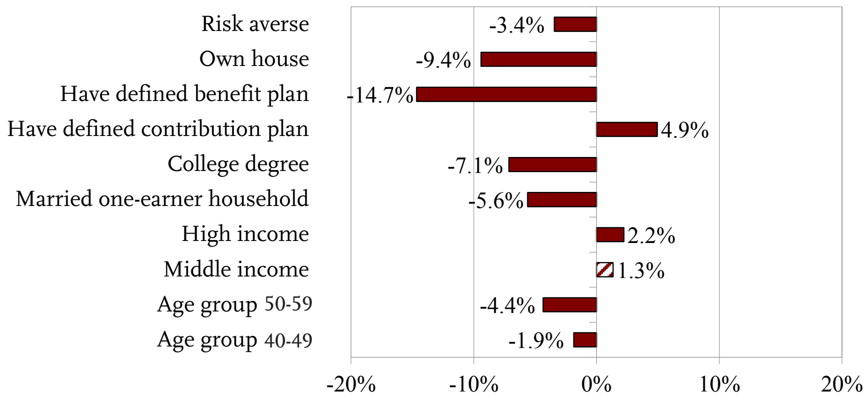
The regression results presented below are for 2013 only, as the results for 2004 were very similar.[8] Overall, the results in Figures 2 and 3 suggest that

Figure 2. Effect of Each Variable on Being in the "Too Worried" Group, 2013



Note: Solid bars are statistically significant at least at the 10-percent level.
Source: Authors' calculations.

Figure 3. Effect of Each Variable on Being in the "Not Worried Enough" Group, 2013



Note: Solid bars are statistically significant at least at the 10-percent level.
Source: Authors' calculations.

those households with incorrect perceptions do so for predictable reasons.[9] The likelihood of being in the "too worried" group stems mainly from not fully recognizing the value of potential income from owning a home, being covered by a defined benefit plan, and being eligible for a 50-percent spousal benefit from Social Security (see Figure 2, on the previous page). A little education about the value of various sources of retirement income could reduce the size of the "too worried" group.

The real danger in terms of misperceptions is being in the "not worried enough" group. The key drivers here are having a defined contribution plan and being in the high-income group (see Figure 3). As noted, households with a 401(k) may suffer from "wealth illusion," not recognizing how little income can be derived from their defined contribution balances. In addition, high-income households may not recognize how much wealth accumulation is required to maintain their standard of living. The 19 percent of households that do not recognize that they are at risk are unlikely to undertake remedial action. Perhaps better educational efforts could help here too, such as focusing more on the amount of retirement income that a given 401(k) balance could produce rather than the total account balance. Unfortunately, it is not clear that the 33 percent that correctly perceive themselves to be at risk will take action either, because of shortsightedness or pressing immediate financial needs.

Conclusion

Despite recent literature indicating that households suffer large gaps in their financial knowledge, nearly three out of five have a good gut sense of their financial situation, and this finding holds both before and after the financial crisis. In the aggregate, households' self-assessments closely mirror the results produced by the NRRI, suggesting that inadequate retirement preparedness is indeed a widespread problem. Even on a household-by-household basis, almost 60 percent of households' self-assessments agree with their NRRI predictions. Moreover, households that get it wrong do so for predictable reasons.

However, classifying households by the accuracy of their perceptions about retirement security does not answer the question of whether they are likely to take remedial action. Under any circumstance, those households that "worry too little" are the least likely to change their saving or retirement plans. This group accounts for 19 percent of households, which means that a significant portion of the population needs to get a better assessment of their retirement income needs. The additional one-third of households that do understand their plight may need less convincing to act, but they still must act.

Endnotes

1 For details on the changing landscape, see Ellis, Munnell, and Eschtruth (2014).

2 Munnell (2015).

3 This amount includes Individual Retirement Account (IRA) balances because most of the money in IRAs is rolled over from 401(k) plans. For details on 401(k) missteps, see Munnell (2014). Munnell et al. (2016) shows that the shift from defined benefit plans to 401(k)s has reduced replacement rates.

4 For studies on individuals' financial knowledge, see Gustman and Steinmeier (2004), Van Rooij, Lusardi and Alessie (2012) and Lusardi and Mitchell (2011a) and (2011b).

5 The NRRI relies on self-reported income and wealth data to determine whether households are at risk. Many studies have shown that these data aggregate well to national averages. But an unknown percentage of households may misreport income or wealth, and the NRRI may therefore incorrectly assign their "at risk" status, and thus their sense of their retirement preparedness, while at the same time correctly measuring the overall percentage at risk. Another explanation for the discrepancy is that individual households may apply a different yardstick in assessing their financial preparedness than the one embodied in the NRRI.

6 A recent study of New Zealanders found a broadly similar result; about one-third of households had an inaccurate perception of their retirement preparedness (Lissington, Matthews, and Naylor 2016).

7 The multinomial logit model allows the analysis to compare the "too worried" group (and, separately, the "not worried enough" group) only to the two groups with an accurate perception. A probit model could be used instead, but it would compare the one group of interest to all three remaining groups in the sample, rather than just the two groups with accurate perceptions.

8 Interestingly, one result that was different for the "too worried" group was having a defined contribution (DC) plan. In 2004, having a DC plan reduced the probability that a household would be "too worried." In other words, having the account seemed to provide a degree of security about retirement preparedness. In 2013, however, having a DC plan increased the likelihood of being "too worried," which suggests that the financial crisis made these households much more concerned about the stability and sufficiency of their 401(k) balances.

9 The effect of each variable listed in Figures 2 and 3 is the marginal effect from the multinomial logit model. It shows the effect of a 1-percent change in the independent variable on the change in the probability of the dependent variable. See the Appendix for full results.

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APPENDIX

Table A1. Marginal Effect of Selected Variables on Being in the Indicated Group

Variables	"Too worried" group	"Not worried" enough group
Risk averse	-0.013	-0.034***
	(0.008)	(0.008)
Own house	0.163***	-0.094***
	(0.009)	(0.007)
Have defined benefit plan	0.075***	-0.147***
	(0.009)	(0.010)
Have defined contribution plan	0.016*	0.049***
	(0.008)	(0.008)
College degree	0.055***	-0.071***
	(0.008)	(0.008)
Married one-earner household	0.050***	-0.056***
	(0.015)	(0.014)
High income	-0.095***	0.022**
	(0.011)	(0.010)
Middle income	-0.074***	0.013
	(0.109)	(0.009)
Age group 50-59	-0.017*	-0.044***
	(0.010)	(0.009)
Age group 40-49	-0.002	-0.019**
	(0.010)	(0.009)
Number of observations	15,643	
Pseudo R-squared	0.039	

Note: Robust standard errors in parentheses. Marginal effects are significant at the 1-percent level (***), 5-percent level (**), or 10-percent level.
Source: Authors' calculations.

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