DO HOUSEHOLDS HAVE A GOOD SENSE OF THEIR RETIREMENT PREPAREDNESS?

By Alicia H. Munnell, Francesca Golub-Sass, Mauricio Soto, and Anthony Webb*

Introduction

The National Retirement Risk Index (NRRI) measures the percentage of working-age households who are 'at risk' of being financially unprepared for retirement today and in coming decades. 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, 44 percent will be 'at risk' of being unable to maintain their standard of living in retirement. An extension of the analysis to account explicitly for health care costs in retirement raises the share of 'at risk' households from 44 percent to 61 percent.

This *brief* examines whether households have a good sense of their own retirement preparedness — do their retirement expectations match the reality that they face? Do people 'at risk' know that they are 'at risk?' The first section summarizes the NRRI and compares households' self-assessed preparedness to the objective measure provided by the NRRI. The second section describes the characteristics of households associated with being too optimistic or too pessimistic. The last section of this *brief* introduces health care costs into the analysis.

The NRRI

To quantify the effects of the changing landscape, the National Retirement Risk Index (NRRI) provides a measure of the percent of working-age American households who are 'at risk' of being financially unprepared for retirement. The Index calculates for each household in the 2004 *Survey of Consumer Finances* a replacement rate — projected retirement income as a percent 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 percent of households 'at risk.'

The results as updated to 2006 show that 44 percent will be 'at risk' of being unable to maintain their standard of living in retirement. An analysis by age group indicates that the situation gets more serious over time (see Table 1 on the next page). About 35 percent of the Early Boomers (those born between 1948 and 1954) will not have an adequate retirement income. This share increases to 44 percent for the Late Boomers (those born between 1955 and 1964), and then rises to 48 percent for the Generation Xers (those born between 1965 and 1974).[1]

TABLE 1. PERCENT OF HOUSEHOLDS 'AT RISK' BY BIRTH
COHORT AND INCOME GROUP, 2006

Income group	All	Early Boomers 1948-1954	Late Boomers 1955-1964	Generation Xers 1965-1974
All	44%	35%	44%	48%
Top third	37	33	36	41
Middle third	41	28	44	46
Bottom third	54	45	54	60

Source: Munnell, Golub-Sass, and Webb (2007).

TABLE 2. PERCENT OF HOUSEHOLDS 'AT RISK' BY BIRTH
COHORT AND INCOME GROUP, INCLUDING HEALTH
CARE EXPENSES, 2006

Income group	All	Early Boomers 1948-1954	Late Boomers 1955-1964	Generation Xers 1965-1974
All	61%	50%	61%	68%
Top third	53	48	52	59
Middle third	57	44	57	67
Bottom third	72	58	74	80

Source: Munnell et al. (2008).

This pattern of increasing risk reflects the changing retirement landscape.[2] The length of retirement is increasing as the average retirement age hovers at 63 and life expectancy continues to rise. 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. Second, while the share of the workforce covered by a pension has not changed over the last quarter of a century, the type of 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 balance for household heads approaching retirement is only $60,000.[3] Finally, most of the working-age population saves virtually nothing outside of their employer-sponsored pension plan.

These estimates, however, do not explicitly account for health care expenses in retirement. Including health care raises the percent of households 'at risk' — that is, not capable of maintaining their pre-retirement standard of non-health care consumption — from 44 percent to 61 percent. Because health care costs are rising rapidly and the retirement income system is contracting, a much larger percent of later cohorts will be 'at risk' than earlier ones. The NRRI rises from 50 percent for Early Boomers to 68 percent for Generation Xers. The pattern also varies by income class, with a much larger share of those 'at risk' in the bottom third than in the top third (see Table 2).[4]

Households' Self-Assessment of Retirement Preparedness

The *Survey of Consumer Finances* (SCF), which is the survey used to construct the NRRI, asks each household to rate the adequacy of their anticipated combined income from Social Security and pensions on a spectrum from one to five, with one being "totally inadequate," three being "enough to maintain living standards" and five being "very satisfactory."[5] Thus, by NRRI standards, any household that answers one or two considers itself to be 'at risk.'

Table 3 shows the results on an aggregate basis. Forty-eight percent of the households in our sample, in responding to this SCF question, consider themselves to be 'at risk' of not having enough to maintain their standard of living in retirement — slightly above the NRRI calculation of 44 percent 'at risk.' The four-percentage-point difference might be attributed to the fact that, in the NRRI, households are not considered

TABLE 3. PERCENT OF HOUSEHOLDS 'AT RISK' BY
INCOME GROUP, 2006

Income group	Self-assessment	NRRI
All	48%	44%
Top third	41	37
Middle third	46	41
Bottom third	58	54

Sources: Authors' calculations based on Center for Retirement Research at Boston College (2006) and U.S. Board of Governors of the Federal Reserve System, *Survey of Consumer Finances,* 2004.

'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.[6]

The self-assessment of retirement prepared-ness shows the same pattern displayed by the NRRI (Tables 3 and 4). Lower income and younger house-holds are more likely to report being 'at risk.' Thus it seems that despite substantial gaps in financial knowledge, as shown in recent literature, in the ag-gregate, households have a good "gut sense" of their financial situation.[7]

TABLE 4. PERCENT OF HOUSEHOLDS 'AT RISK' BY BIRTH COHORT, 2006

Cohort	Self-assessment	NRRI
All	48%	44%
Early Boomers	44	35
Late Boomers	50	44
Generation Xers	51	48

Sources: Authors' calculations based on Center for Retire-ment Research at Boston College (2006) and 2004 SCF.

Households' Self-Assessment vs. the NRRI

Even if aggregate perceptions match the NRRI, it is possible that households' assessment of retirement preparedness differs from the NRRI on a household-by-household basis. Table 5 examines how well households are able to perceive their retirement risk.

Quadrants I and IV show the households whose self-assessment agrees with the NRRI — they re-

TABLE 5. HOUSEHOLDS 'AT RISK' AND NOT 'AT RISK' ACCORDING TO THE NRRI AND INDIVIDUAL RESPONSES, 2006

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)

Sources: Authors' calculations based on Center for Retire-ment Research at Boston College (2006) and 2004 SCF.

port not having enough resources 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.' Fifty-seven percent of house-holds appear to know how they will fare in retire-ment.[8] Quadrant II shows households that appear to be more concerned than needed — 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. Quadrant III shows that only 19 percent of households 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.'

The question is what characteristics cause a household to be 'too worried' or 'not worried enough' as opposed to getting it right.[9] Figures 1 and 2 report the results of a multinomial logit equation that examines the impact on putting households in one category or another of the following variables: risk aversion, income group, birth cohort, household type, defined benefit coverage, home ownership, educa-tion, and health status.[10] Figure 1 shows the impact

FIGURE 1. EFFECT OF EACH VARIABLE ON BEING IN THE 'TOO WORRIED' GROUP
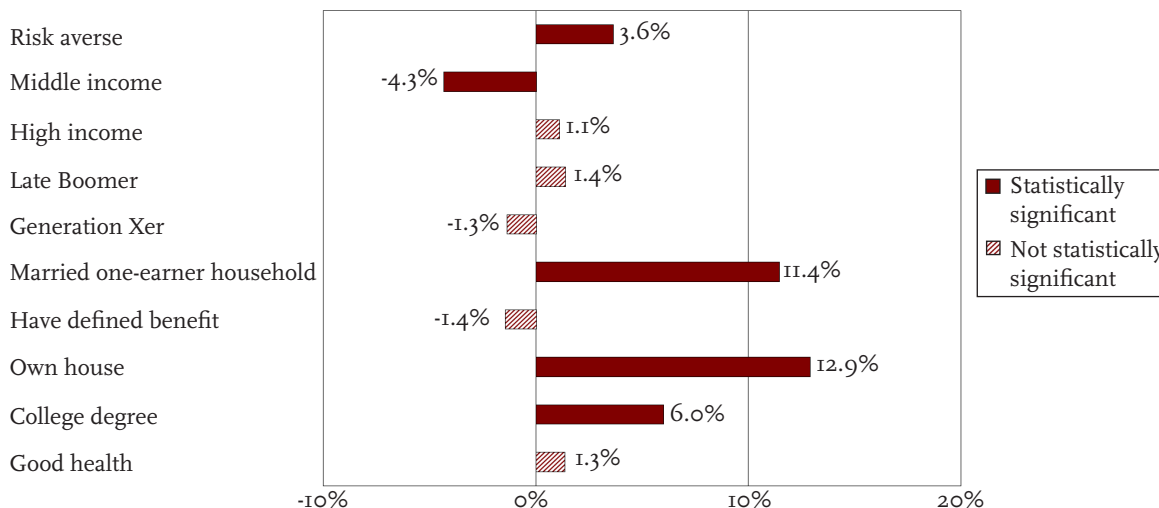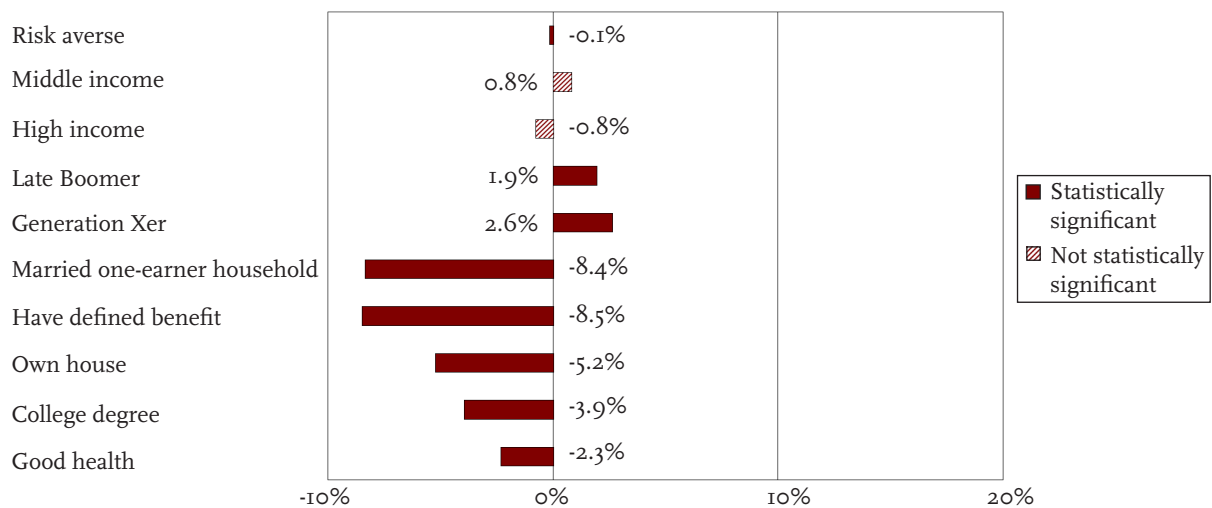

Source: Authors' calculations.

of each variable on the probability of ending up in the 'too worried' group as opposed to getting it just right; Figure 2 shows the impact on the probability of ending up in the 'not worried enough' group.

The figures tell an intuitive story.

- *Risk aversion.* The measure of risk aversion comes from an SCF question that asks households about how much financial risk they are willing to take in order to get higher investment returns.[11] If a household is not willing to take any financial risk, it is classified as risk averse. As one would expect, a risk averse household is more likely to end up as 'too worried,' and less likely to end up as 'not worried enough.'

- *Income group.* Being in the highest income category does not increase the probability of being either 'too worried' or 'not worried enough;' these households are most likely to get it right. Middle-income households are much less likely than low-income households to be in the 'too worried' group, suggesting that low-income households are most likely to worry too much. Low-income households are financially pressed while working and may be fearful of retirement. However, Social Security's progressive benefit structure provides relatively high replacement rates to these households, so they end up in better shape than they fear.

- *Cohort.* The younger the cohort, the more likely the household is to be in the 'not worried enough' group. Essentially, the result says that younger cohorts are less well-informed about the trends in the retirement income system and less likely to foresee the potential for those trends to put them 'at risk.'

- *Household type.* Married one-earner households are significantly more likely to be in the 'too worried' group and significantly less likely to be in the 'not worried enough' group than other household types. This strong finding probably reflects the fact that Social Security provides a spouse's benefit equal to 50 percent of the benefit of the higher earning spouse and many couples may not be aware of it before they claim benefits. As a result, married one-earner households end up with higher replacement rates than other household types and find themselves in a better position than expected.

- *Have defined benefit plan.* Households with a defined benefit plan are significantly less likely to be in the 'not worried enough' category than those without such a plan. These households presumably know that they have a guaranteed income for life and probably are not 'at risk' both in the NRRI calculation and in terms of their self-assessment.

FIGURE 2. EFFECT OF EACH VARIABLE ON BEING IN THE 'NOT WORRIED ENOUGH' GROUP

Source: Authors' calculations.

- *Own house.* Owning a house significantly increases the likelihood of being in the 'too worried' group and significantly reduces the likelihood of being in the 'not worried enough' group. The NRRI shows most of these home-owning households as not being 'at risk' because it has them taking a reverse mortgage on their home and annuitizing the proceeds. On the other hand, surveys show that households do not plan to tap home equity to support general consumption in retirement, so these households with homes underestimate their potential well-being, and fall in the 'too worried' category.[12]

- *College degree.* Having a college degree significantly increases the probability of falling into the 'too worried' group and significantly reduces the probability of being in the 'not worried enough' group. The implication is that education increases households' time horizon and the probability that they think about their well-being in retirement. Predictably, this perspective means that they are much less likely to be caught unaware, but surprisingly it also suggests that they might worry too much.

- *Good health.* Being in good health has a small but statistically significant negative effect on the probability of being classified as 'not worried enough.' Perhaps the best way to interpret this result is that those in good health have the energy to focus on financial issues and are less likely to be adversely surprised by their preparedness for retirement.

Overall, the results suggest that not only do a high percentage of households have a good sense about their preparedness for retirement, but those households with incorrect perceptions do so for predictable reasons. The real danger in terms of misperceptions is being 'not worried enough.' One factor that puts households in this category is age; younger households are simply much less aware than older households of the challenges they will face. But being anything but a one-earner married couple, not having a defined benefit plan, not owning a home, and not having a college degree also increases the probability of being in the 'not worried enough' group. These 19 percent of households that do not recognize that they are 'at risk' are unlikely to undertake remedial action. Unfortunately, it is not clear that the 25 percent that correctly perceive themselves to be 'at risk' will take action either.

The Role of Health Care

As noted above, the NRRI was re-estimated to explicitly account for health care expenses in retirement. Including health care raises the percent of households 'at risk' — that is, not capable of maintaining their pre-retirement standard of non-health care consumption — from 44 percent to 61 percent. Table 6 shows how well households are able to perceive their retirement risk when faced with the higher hurdle. Again, quadrants I and IV show that 57 percent of households appear to know how they will fare in retirement. Quadrant II shows households that are 'too worried' and quadrant III those 'not worried enough.'

TABLE 6. HOUSEHOLDS 'AT RISK' AND NOT 'AT RISK' ACCORDING TO THE NRRI WITH HEALTH CARE AND INDIVIDUAL RESPONSES, 2006

Household response	NRRI	
	'At risk'	Not 'at risk'
'At risk'	33% (quadrant I)	16% (quadrant II)
Not 'at risk'	28% (quadrant III)	24% (quadrant IV)

Sources: Authors' calculations based on Munnell, et al. (2008) and 2004 SCF.

Table 7 compares the classification results for the NRRI with and without explicitly recognizing health care expenses. Interestingly, the percent of households that misperceive their situation remains virtually the same — 43 to 44 percent — but the composition of that 43 to 44 percent changes dramatically. Under the original NRRI, most of those households with an inaccurate perception were worrying more than necessary. Once health care is introduced into

TABLE 7. ORIGINAL NRRI AND NRRI WITH HEALTH CARE BY INDIVIDUAL RESPONSES, 2006

NRRI	Quadrant			
	I ('At risk'/ 'at risk')	II ('Too worried')	III ('Not worried enough')	IV (Not 'at risk'/ not 'at risk')
Original	25%	24%	19%	32%
With health care	33	16	28	24

Sources: Authors' calculations based on Munnell, et al. (2008) and 2004 SCF.

the calculation, the majority of those who got it wrong were 'not worried enough.' The clear message is that households tend to underestimate the adverse impact that health care costs will have on their standard of living in retirement.

Conclusion

Despite recent literature indicating that households suffer large gaps in their financial knowledge, most have a good gut sense of their financial situation. Households' self-assessments closely mirror the results produced by the NRRI. 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. Households that are risk averse, that include a one-earner married couple, and that own their own home are more likely to worry too much. Being a two-earner couple or single person, not owning a home, not being covered by a defined benefit pension, and not having a college degree all increase the probability of 'not worrying enough.'

Explicitly recognizing health care costs and setting the goal of maintaining non-health care consumption raises the hurdle on being prepared and increases the percent of households 'at risk.' Including health costs does not increase the percent of households that misperceive their situation; almost 60 percent continue to understand their situation. Among those who misperceive their retirement outlook, however, the majority now fall into the category of 'not worried enough.'

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 28 percent of households once health care costs are recognized explicitly, which means that a significant portion of the population needs to get a better assessment of their retirement income needs.

Endnotes

1 This sample does not include Generation Xers born after 1974.

2 For more detail on the changing retirement landscape, see Center for Retirement Research at Boston College (2006).

3 This amount includes Individual Retirement Account (IRA) balances, because most of the money in IRAs is rolled over from 401(k) plans. For further details on 401(k) missteps, see Munnell and Sundén (2006).

4 As discussed in earlier *briefs*, part of this pattern reflects the fact that low-income households rely almost exclusively on Social Security benefits, which are scheduled to decline sharply relative to pre-retirement earnings. But health care spending is also a powerful force putting large numbers of low-income households 'at risk.' This impact occurs despite the fact that households in the bottom third of the income distribution only spend about 70 percent of what middle-income households spend, partly because some households in this group have their premiums and copayments covered by Medicaid.

5 The NRRI calculations take all assets into account when assessing retirement preparedness and do not solely look at Social Security and pension income. This discrepancy is not significant because, for most households, Social Security and pension income are the main sources of retirement income. On average, based on NRRI data, Social Security and pension income account for about 75 percent of expected retirement income. The SCF asks the following question:

> "Using any number from one to five, where one equals totally inadequate and five equals very satisfactory, how would you rate the retirement income you (receive or expect to receive) from Social Security and job pensions? (include 401(k) accounts and all other types of pensions)"
>   1. Totally inadequate
>   2.
>   3. Enough to maintain living standards
>   4.
>   5. Very satisfactory.

6 In addition, the NRRI calculations take into account all resources — including other financial assets and the proceeds from a reverse mortgage — when assessing retirement preparedness, while the self-assessment question refers solely to Social Security and pension income. As noted, however, for most households Social Security and pension income are the main sources of retirement income.

7 See Gustman and Steinmeier (2004) and Lusardi and Mitchell (2007).

8 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 mis-report 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.

9 A potential concern is that our analysis of this question may be identifying an incorrect assignment of 'at risk' status instead of lack of awareness of the household's situation. We think this situation is unlikely as most of the variables that we find to be significant are unrelated to inputs to the NRRI algorithm, and therefore plausibly uncorrelated with any classification errors.

10 The regression uses the 2004 NRRI classification — under which 43 percent (rather than 44 percent) of the households are 'at risk' — because the responses to the retirement preparedness self-assessment question from the SCF were given in 2004.

11 The SCF asks the following question to gauge a household's level of risk aversion: "Which of the following statements comes closest to describing the amount of financial risk that you are willing to take when you save or make investments?"
     1. Take substantial financial risks expecting to earn substantial returns.
     2. Take above average financial risks expecting to earn above average returns.
     3. Take average financial risks expecting to earn average returns.
     4. Not willing to take any financial risks.

12 Munnell, Soto, and Aubry (2007).

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Contact Information

Center for Retirement Research
Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467-3808
Phone: (617) 552-1762
Fax: (617) 552-0191
E-mail: crr@bc.edu
Website: http://www.bc.edu/crr