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HOW WILL HIGHER TAX RATES AFFECT THE NATIONAL RETIREMENT RISK INDEX?

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Introduction

The National Retirement Risk Index (NRRI) measures the share of American households 'at risk' of being unable to maintain their pre-retirement standard of living in retirement. The calculations are based on the assumption that taxes remain at current levels. But federal government spending as a percentage of GDP is projected to increase rapidly in coming decades. To help bridge the gap between revenue and spending, policymakers could decide to substantially increase the personal income tax, raise Social Security payroll taxes, and establish additional revenue sources such as a value-added tax. This *brief* explores how such tax increases could affect the percentage of households 'at risk.'

This *brief* is structured as follows. The first section recaps the NRRI. The second describes how much taxes could increase. The third section describes the channel through which higher taxes may affect retirement preparedness. The fourth section presents the impact of plausible tax increases on the percentage of households 'at risk.' The final section concludes that higher taxes will have a relatively modest effect on the NRRI for most groups – the exception being high-income households on the cusp of retirement. It also cautions that the effect could be substantially greater if people reduce their saving in response to an unprecedented increase in taxes, and that the increase in the NRRI tells only half the story because economic well-being as measured by consumption will be lower both before and after retirement.

A Recap of the NRRI

The NRRI measures the percentage of working-age households who are 'at risk' of being financially unprepared for retirement. The Index is constructed using data from the Federal Reserve's *Survey of Consumer Finances*, a triennial survey of a nationally representative sample of U.S. households, which collects detailed information on households' assets, liabilities, and demographic characteristics. For each household, the NRRI calculates a replacement rate – projected pre-tax retirement income as a percentage of pre-retirement earnings – and compares it to a pre-tax target rate derived from a life-cycle consumption-smoothing model. The target-rate calculations

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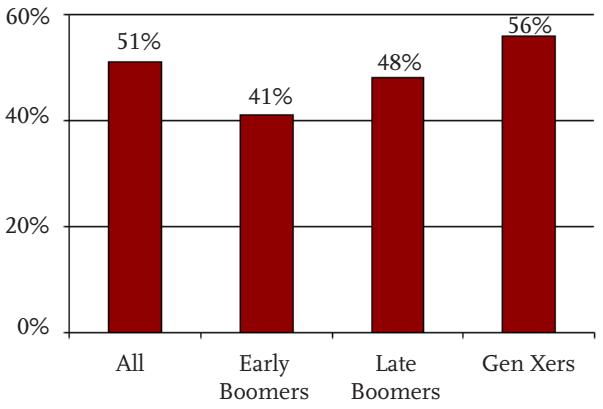
assume that households save optimally so that they are able to maintain their pre-retirement consumption in retirement. The calculations further assume that tax rates remain at current levels. Households who fail to come within 10 percent of the target are defined as 'at risk,' and the Index reports the percentage of households 'at risk.' The NRRI shows that 51 percent of households were 'at risk' in 2009 (see Figure 1).[1]

Figure 1. Percentage of Households 'At Risk' by Cohort, 2009



Source: Munnell, Webb, and Golub-Sass (2009).

How Much Could Taxes Increase?

Federal spending is projected to grow rapidly in coming decades. The National Research Council (NRC) and National Academy of Public Administration (NAPA) in *Choosing the Nation's Fiscal Future* calculate that if nothing is done, government debt will increase from the 2010 level of 61 percent of GDP to 79 percent by 2020, 118 percent by 2030, and 180 percent by 2040.[2]

To prevent a fiscal crisis, the government will need to cut spending and increase taxes.[3] Toward this end, the NRC/NAPA study considers four illustrative scenarios. As our interest is in how higher taxes would affect retirement risk, we have selected the NRC/NAPA scenario involving the largest tax increases – the "high spending and revenue" scenario, which still requires measures to restrain spending growth.[4] We are not attempting to predict which scenario is most likely, only to gauge the impact of a large, but plausible, change in taxes on the NRRI.

The "high spending and revenue" scenario involves tax revenues rising from the current level of 18-20 percent of GDP to 28 percent by 2050. Current tax cuts would be allowed to expire and, in the absence of tax simplification, the top personal income tax rate would increase to 50 percent by 2020.[5] But even this increase would be insufficient to bridge the fiscal gap in subsequent years. To avoid the economic distortions associated with very high marginal tax rates, a value-added tax would be introduced around 2020, with the rate increasing from 0.9 percent initially to 8.1 percent in 2050. The Social Security tax would also increase from its current rate of 12.4 percent for employers and employees combined to 14.7 percent by 2080. The cap would be raised, and income above the cap would be subject to tax, albeit at a lower rate.[6]

How Will Tax Increases Affect Retirement Preparedness?

To understand how increased taxes fit in the NRRI framework, recall that the NRRI includes *projected* replacement rates and *target* replacement rates, both calculated on a pre-tax basis. As constructed, an increase in taxes will not affect projected replacement rates in the NRRI. The numerator remains unchanged because the NRRI is based on the assumption that the tax burden has no effect on wealth accumulation. This assumption reflects a previous Center for Retirement Research study, which shows striking similarities in wealth accumulation trajectories across succeeding birth cohorts, in the face of substantial changes in the pension landscape.[7] The denominator does not change because it is pre-tax income.

Tax increases *will* have an effect on target replacement rates. The effect differs greatly between workers on the cusp of retirement with no time to adjust and young workers who have the time to reduce consumption both before and after retirement.

Early Boomers

Early Boomers are taken by surprise; they have consumed over their working life under one tax regime and then on the brink of retirement are faced with a new, higher level of taxes.[8] Essentially, the revised higher target replacement rates are those at which older households can pay the increased tax burden and still achieve their original target level of post-retirement consumption. These target replacement rates for all households in this older cohort are

affected by the imposition of the value-added tax because consumption exceeds taxable income for older households. Most households are little affected by the increase in personal income tax rates due to relatively modest taxable incomes, but the impact on the top third can be substantial.[9] Regardless of income, retirees are not affected at all by payroll tax rate hikes, because they do not contribute to Social Security or Medicare. Target replacement rates increase by 2.1, 4.3, and 11.4 percentage points for Early Boomers in the bottom, middle, and top third of the income distribution, reflecting the marked impact of prospective personal income tax increases on high-income households.

Generation Xers

At the other extreme are the Generation Xers. In contrast to the Early Boomers, who are taken by surprise, Generation Xers – the youngest generation in the NRRI – can respond to the tax increases by reducing consumption both during their worklife and in retirement. The reduction in planned consumption in retirement reduces the target replacement rates. But this reduction is offset by the need for greater post-retirement income in order to pay the higher taxes in retirement. For many households at the start of their working lives, these effects approximately offset each other. But the scenario also includes a value-added tax that is phased in slowly, so that the price of goods rises over time. These rising prices mean that households will need a higher target replacement rate to cover higher relative prices in retirement. The net impact of higher taxes in the NRRI framework is to modestly increase the target replacement rates by 1.3, 2.8, and 0.6 percent for Generation Xers in the bottom, middle, and top thirds of the income distribution.

Late Boomers

The benchmark for Late Boomers – the middle group in the NRRI population – is a level of consumption that is the average of what was previously optimal and what is optimal in the higher-tax world. Based on this assumption, the revised replacement rate targets lie between those of the Early Boomers and the Generation Xers.

Impact of Tax Increases on the NRRI

Armed with the revised target replacement rates, the NRRI compares these benchmarks with projected replacement rates and reports the percentage 'at risk' for the three cohorts – Early Boomers, Late Boomers, and Gen Xers.

In 2009, 48, 38, and 37 percent of Early Boomers in the bottom, middle, and top thirds of the income distribution were 'at risk' (see Table 1). At the new income tax rates, and with the introduction of a value-added tax, 50, 42, and 49 percent are 'at risk,' increases of 2, 4, and 12 percentage points respectively. High-income households face the largest increases in replacement rate targets due to the hike in income tax rates. As a result, after the tax increases, the percentage 'at risk' for the top third of households is almost identical to that for the bottom third.

Table 1. Impact of Tax Increases on Percentage of Early Boomers 'At Risk,' 2009

Status	Income group			All
	Bottom third	Middle third	Top third	
Before tax increases	48 %	38 %	37 %	41 %
After tax increases	50 %	42 %	49 %	47 %
Change in 'at risk'	+2	+4	+12	+6

Source: Authors' calculations.

In contrast, the Generation Xers have time to adjust their consumption both before and after retirement. Because they can reduce their pre-retirement consumption and therefore have less to replace in retirement, the increases in the percentage 'at risk' are somewhat less than for the Early Boomers, even though they face a greater increase in their lifetime tax burden (see Table 2 on the next page).

It is important to note that the calculations of the increase in the percentage of Generation Xers 'at risk' capture only part of the overall impact of tax

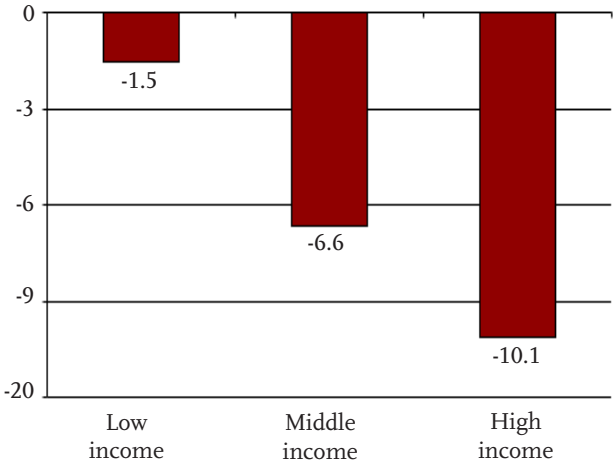
Table 2. Impact of Tax Increases on Percentage of Generation Xers 'At Risk,' 2009

Status	Income group			All
	Bottom third	Middle third	Top third	
Before tax increases	64%	54%	51%	56%
After tax increases	66%	56%	53%	58%
Change in 'at risk'	+2	+2	+2	+2

Source: Authors' calculations.

increases on this birth cohort's financial well-being. Their revised replacement rate targets incorporate declines in consumption of 1.5, 6.6, and 10.1 percent for typical households in the bottom, middle, and top thirds, respectively (see Figure 2).[10] In other words, measuring the percentage 'at risk' – the percentage of households not able to maintain their pre-retirement standard of living – tells only part of the story.

Figure 2. Decline in Target Consumption for Gen Xers, by Income Group, 2009



Source: Authors' calculations.

Table 3 shows the impact of tax increases on the percentage of Late Boomers 'at risk.' The increases in the percentage 'at risk' are somewhat higher than for the Generation Xers, but less than for the Early Boomers, reflecting the blending of original and revised targets.

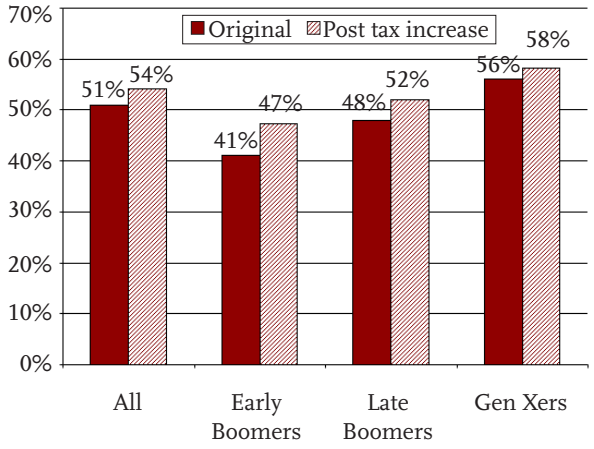
Table 3. Impact of Tax Increases on Percentage of Late Boomers 'At Risk,' 2009

Status	Income group			All
	Bottom third	Middle third	Top third	
Before tax increases	62%	46%	36%	48%
After tax increases	64%	51%	43%	52%
Change in 'at risk'	+2	+5	+7	+4

Source: Authors' calculations.

The net impact of the tax increases on the NRRI is relatively modest (see Figure 3). Overall, the Index increases from 51 to 54 percent of working-age households. The biggest increase occurs among the Early Boomers, who are caught by surprise; the smallest increase occurs among the Generation Xers, as their target rates incorporate reduced consumption from the tax hikes.

Figure 3. Percentage of Households 'At Risk' by Cohort, Pre- and Post-Tax Increase, 2009



Source: Authors' calculations.

Conclusion

Taxes are likely to increase substantially in coming years, and these taxes will raise the NRRI relatively modestly in most cases – the exception being high-income households at the cusp of retirement. Tax increases have a smaller impact on the percentage of younger households 'at risk,' as they have more time to adjust to a high-tax environment. The NRRI, however, captures only part of the impact of higher taxes, as households would also face substantial reductions in consumption both before and after retirement.

Note that the NRRI assumes no response in terms of reduced saving and wealth accumulation, which reflects our assumption that tax increases do not affect saving behavior. But the unprecedented level of the prospective tax increases considered in this *brief* will substantially reduce post-tax income. If households were to respond by cutting savings as well as consumption, due to choice or necessity, the percentage of households 'at risk' would be larger. This *brief* errs on the conservative side by assuming no behavioral effect.

Endnotes

1 Munnell, Webb, and Golub-Sass (2009). The latest *Survey of Consumer Finances* was in 2007. The NRRI projects these data to 2009 to calculate the percentage of households 'at risk' in that year.

2 National Research Council and National Academy of Public Administration (2010).

3 This analysis does not cover potential tax changes at the state and local level. For our purposes, we implicitly assume that these tax rates are stable over the long run.

4 Although the alternative NRC/NAPA scenarios involve smaller tax increases, they also include more substantial benefit cuts that could affect retirement risk. For example, under the "low spending and revenue" scenario, Social Security replacement rates for medium and high earners decline by 11 percentage points by 2065, relative to current law (which already incorporates lower replacement rates due to the rise in the program's Full Retirement Age). These benefit cuts might substantially increase the percentage of households 'at risk' if households fail to increase personal savings to compensate for the reduction in retirement benefits.

5 This scenario assumes that the Alternative Minimum Tax (AMT) is price indexed, meaning that more households will be subject to the AMT over time due to real wage growth. However, under this assumption, the AMT will continue to affect predominantly high-income households.

6 Of course, these illustrative tax changes represent only one possible approach to raising taxes. While other changes aimed at generating an equivalent amount of federal revenue – such as alterations to existing tax exemptions, exclusions, and credits – would perhaps have somewhat different distributional effects, their overall impact on the National Retirement Risk Index would be similar to the results we present.

7 Delorme, Munnell, and Webb (2006).

8 Intuitively, one can think of the introduction of the new regime as cutting a households accumulated retirement wealth but, because we rely on a pre-tax measure of accumulated wealth in projecting replacement rates, the adjustment is instead made to the households' target replacement rates.

9 Several factors reduce taxable incomes for retirees. First, income from Social Security is accorded favorable tax treatment. Second, the standard deduction is higher for those individuals over 65. Third, the consumption of non-tax deferred wealth and borrowings on a reverse mortgage do not give rise to any income tax liability. As a result, more than half of retired households currently pay no federal income tax (Tax Policy Center, 2008).

10 We assume a two-earner, home-owning household without a defined benefit pension plan, the most common household type in this age group.

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