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CENTER *for* RETIREMENT RESEARCH *at* BOSTON COLLEGE

TRENDS IN RETIREMENT SECURITY BY RACE/ETHNICITY

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Introduction

Retirement security has declined in the wake of the global financial crisis and ensuing recession. Despite an extended period of recovery, half of households ages 30-59 are at risk of inadequate retirement income compared to 44 percent in 2007. The questions addressed in this *brief* are how the percentage at risk varies by race/ethnicity in 2016 and how the impact of the crisis and the recovery led to the 2016 pattern.

This *brief* uses the National Retirement Risk Index (NRRI) to assess the retirement security of today's working-age households. The NRRI is calculated by comparing households' projected replacement rates – retirement income as a percentage of pre-retirement income – with target replacement rates that would allow them to maintain their standard of living. These calculations are based on the Federal Reserve's *Survey of Consumer Finances*, a triennial survey of a nationally representative sample of U.S. households. As of 2016, the NRRI showed that, even if households worked to age 65 and annuitized all their financial assets (including the receipts from reverse mortgages on their homes), half of households were at risk of falling short in retirement.

The discussion proceeds as follows. The first section describes the nuts and bolts of the NRRI. The second section presents background data on wealth and earnings, showing that white households now hold roughly six times as much wealth and earn almost twice as much as minority households. The third section reports the NRRI for white, black, and Hispanic households for 2007-2016. In 2016, whites had the lowest share at risk, followed by blacks and then Hispanics. The pattern over time is somewhat surprising, with the situation of blacks holding relatively steady and that of Hispanics deteriorating sharply. To explain this pattern, the fourth section explores the underlying wealth and earnings data. The data suggest that the deterioration for Hispanics reflects their buying housing in the wrong places at the wrong time and that the steadiness for blacks is a function of falling earnings at the bottom of the income distribution and Social Security's progressive benefit formula. The final section concludes that while considerable inequality exists in retirement preparedness, it is significantly less than exists in the distribution of wealth and earnings before retirement. The reason, though, is that minorities have a lower standard of living to maintain than whites.

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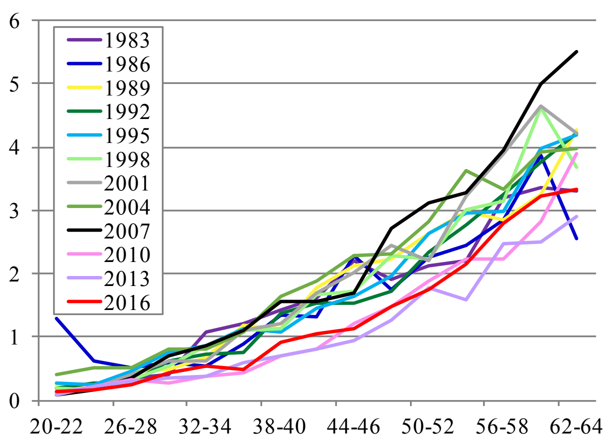
Nuts and Bolts of the NRRI

Calculating the NRRI involves three steps: 1) projecting a replacement rate for each household; 2) constructing a target replacement rate that would allow each household to maintain its pre-retirement standard of living in retirement; and 3) comparing the projected and target replacement rates to find the percentage of households "at risk."

Retirement income at age 65, which is defined broadly to include all of the usual suspects plus housing, is derived by projecting the assets that households will hold at retirement, based on the stable relationship between wealth-to-income ratios and age that is evident in the 1983-2016 *Surveys of Consumer Finances* (SCFs). As shown in Figure 1, wealth-to-income lines from each survey rest virtually on top of one another, bracketed by 2007 values on the high side and 2013 values on the low side.

Figure 1. Ratio of Wealth to Income by Age from the *Survey of Consumer Finances*, 1983-2016



Sources: Authors' calculations based on U.S. Board of Governors of the Federal Reserve System, *Survey of Consumer Finances* (1983-2016).

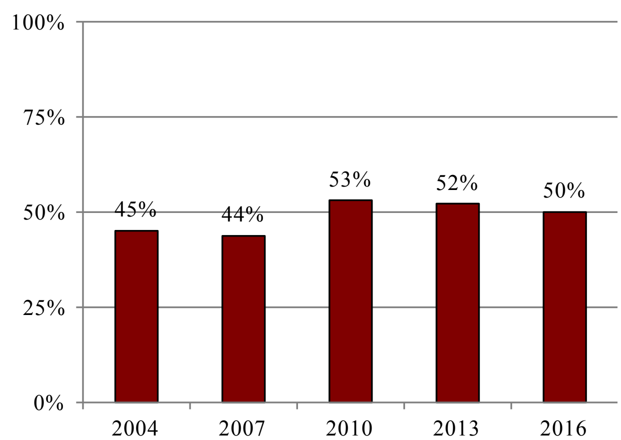
Sources of retirement income that are not derived from SCF-reported wealth are estimated directly. For defined benefit pension income, the projections are based on the amounts reported by survey respondents who have already retired. For Social Security, benefits are calculated directly based on estimated earnings histories for each member of the household.

A calculation of projected replacement rates also requires income *prior to* retirement. The items that comprise pre-retirement income include earnings, the return on 401(k) plans and other financial assets, and imputed rent from housing. In essence, with regard to wealth, income in retirement equals the annuitized value of all financial and housing assets; income before retirement is simply the return on those same assets.[1] Average lifetime income then serves as the denominator for each household's replacement rate.

Determining the share of the population at risk requires comparing projected replacement rates with the appropriate target rates. Target replacement rates are estimated for different types of households assuming that households spread their income so as to have the same level of consumption in retirement as they had before they retired. Households whose projected replacement rates fall more than 10 percent below their target are deemed to be at risk of having insufficient income to maintain their pre-retirement standard of living. The NRRI is simply the percentage of *all* households that fall more than 10 percent short of their target.

In 2016, the year of the most recent SCF, the overall share at risk was 50 percent – still considerably higher than it was before the financial crisis (see Figure 2).

Figure 2. The National Retirement Risk Index, 2004-2016



Source: Authors' calculations.

Wealth and Earnings by Race/Ethnicity

Before looking at retirement preparedness, it is useful to understand the levels of wealth and earnings for white, black, and Hispanic households ages 30-59 included in the NRRI sample.[2]

In terms of wealth, two patterns stand out (see Table 1). First, wealth for all households has not recovered from the global financial crisis; wealth (in 2016 dollars) remains lower in 2016 than in 2007. Second, the wealth of white households is many multiples of that for black and Hispanic households, and those multiples increased sharply after 2007, peaking in 2013 and falling back slightly in 2016.[3]

Table 1. Median Net Wealth (in 2016 Dollars) by Race/Ethnicity, 2007-2016

Race/ethnicity	2007	2010	2013	2016
	Level			
White	$183,100	$113,400	$106,000	$132,100
Black	39,000	18,500	13,300	18,300
Hispanic	59,300	21,800	17,700	24,400
	Ratio			
White/Black	4.7	6.1	8.0	7.2
White/Hispanic	3.1	5.2	6.0	5.4

Sources: Authors' calculations from the SCF (2007-2016).

The story for earnings is somewhat different (see Table 2). By 2016, median household earnings for white households had recovered from the financial crisis, but earnings for black and Hispanic households were still below their 2007 levels. Second, the disparity in earnings is less dramatic than the disparity in wealth but still very significant, with whites earning about twice that of blacks and Hispanics.[4]

How lower earnings and wealth translate into retirement preparedness is not straightforward. On the one hand, lower earnings make it more difficult to save for retirement. Moreover, lower wealth means minorities are less likely to own a home, which could support their consumption in retirement. On the other hand, lower earnings mean a lower target income to replace in retirement and a higher replacement rate from Social Security's progressive benefit formula. In other words, the topic requires further exploration.

Table 2. Median Household Earnings (in 2016 Dollars) by Race/Ethnicity, 2007-2016

Race/ethnicity	2007	2010	2013	2016
	Level			
White	$63,900	$61,800	$62,800	$67,200
Black	39,100	35,700	32,100	37,000
Hispanic	44,000	36,100	35,400	38,000
	Ratio			
White/Black	1.6	1.7	2.0	1.8
White/Hispanic	1.5	1.7	1.8	1.8

Sources: Authors' calculations from the SCF (2007-2016).

NRRI by Race/Ethnicity

Table 3 presents the NRRI for white, black, and Hispanic households ages 30-59 from 2007 to 2016. As expected, whites have the lowest percentage at risk – with 48 percent unable to maintain their standard of living in retirement. Blacks have a somewhat higher share at risk with 54 percent, while Hispanics show 61 percent at risk.

Table 3. NRRI by Race/Ethnicity, 2007-2016

Race/ethnicity	2007	2010	2013	2016
White	42%	49%	48%	48%
Black	52	60	57	54
Hispanic	51	63	68	61
All	44	53	52	50

Source: Authors' calculations.

The 2016 pattern for blacks and Hispanics is very different than that in 2007. At that time, the two groups were about equal; by 2016 the NRRI for black households had increased only slightly, while that for Hispanic households had risen by 10 percentage points. The question is what explains these divergent trends in retirement risk. How much of the increase is due to the financial crisis and ensuing recession and how much to other ongoing changes affecting households' assets and income?

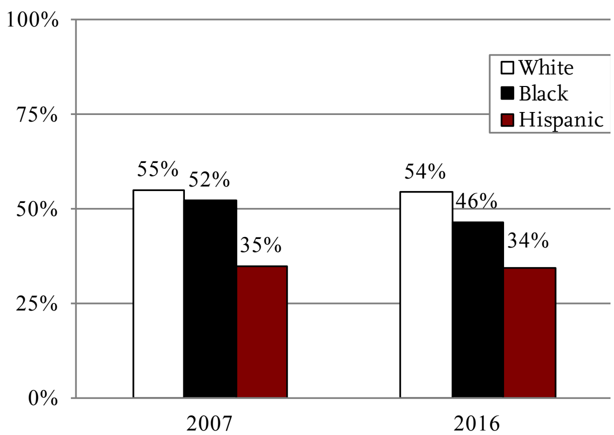
NRRI Changes since the Crisis by Race/Ethnicity

The three possible areas where the financial crisis and ensuing recession could affect the NRRI for white, black, and Hispanic households differently are retirement plans, housing, and wage growth.

Retirement Plans

Employer-sponsored retirement plans are unlikely to be the source of the differing patterns of blacks and Hispanics for two reasons. First, black workers were more likely than Hispanic workers to participate in a plan and therefore were more exposed to losses than their Hispanic counterparts (see Figure 3).[5]

Figure 3. Percentage of Workers Participating in a Retirement Plan, 2007 and 2016, by Race/Ethnicity



Sources: Authors' calculations from the SCF (2007, 2016).

Second, by 2016, any effect of the financial crisis on retirement assets in defined contribution plans had dissipated with the recovery (see Figure 4).[6] Thus, retirement plans cannot explain the relative stability of the NRRI for blacks or the sharp jump for Hispanics.

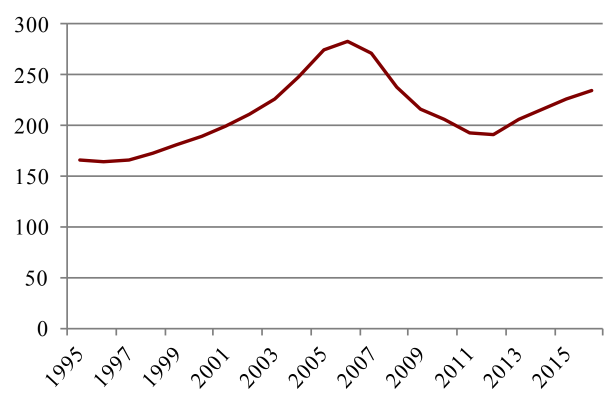
Housing

In contrast to retirement plans, which are held primarily by middle- and higher-income households, the house is an important asset across the income spectrum; and home prices have experienced a major boom and bust cycle since 2000 (see Figure 5). In the NRRI, home ownership and home prices have a significant impact because households are assumed to access their home equity at retirement by taking out a reverse mortgage. The higher the home value, the more households can extract in cash and turn into an income stream through annuitization. Households of all races were hurt by the collapse of home prices, and even by 2016, home prices had not recovered to their pre-crisis levels.

Figure 4. Dow Jones Wilshire 5000 Index (Real), 1995-2016

Sources: Wilshire Associates (2018); and U.S. Bureau of Labor Statistics (2018).

Figure 5. Index of Average U.S. Home Prices (Real), 1995(Q1)-2016(Q4)



Source: S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index (2018).

However, the pain was not distributed evenly. While the decline in house values was about the same for blacks and whites, Hispanic households saw their median value drop by 41 percent between 2007 and 2016 (see Table 4).[7]

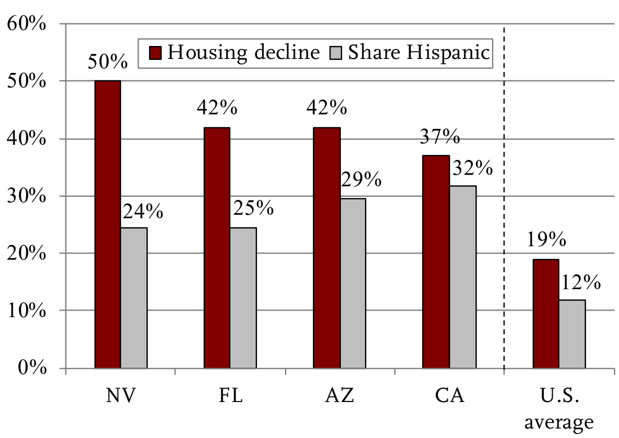
Table 4. Median Net Value of Housing (in 2016 Dollars) for Homeowners, by Race/Ethnicity, 2007 and 2016

Race/ethnicity	2007	2016	% change 2007-2016
White	$108,809	$86,000	-21%
Black	62,507	49,000	-22
Hispanic	109,966	65,000	-41

Sources: Authors' calculations from the SCF (2007, 2016).

The reason for the serious hit to Hispanics' home equity is that the housing downturn had a distinct geographic pattern, with Nevada, Florida, Arizona, and California experiencing the sharpest declines. In each of these states, Hispanics account for one-quarter to one-third of the population ages 30-59 (see Figure 6).

Figure 6. States with Largest Percentage Decline in Median Home Prices During 2006-2010, and Share of Hispanic Households Ages 30-59 in 2016

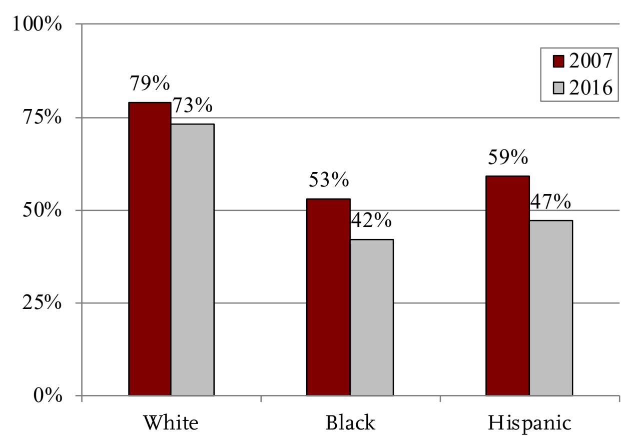


Sources: Federal Housing Finance Agency (2006-2010) and U.S. Census Bureau, *Current Population Survey* (2016).

Overall, about 40 percent of all Hispanic households in the country resided in the hardest-hit states. In contrast, only 20 percent of white and black households lived in the hardest-hit states. Before the housing bubble burst, Hispanic households in these states had a net worth more than four times the net worth of Hispanics elsewhere; after the bubble burst, the net worth of Hispanics had equalized across regions.[8]

The decline in housing values was only part of the damage done by the bursting of the housing bubble; the other dimension is homeownership. Homeownership rates in 2016 were lower across the board than in 2007 (see Figure 7). The declines, however, have been particularly large for black and Hispanic households; less than half of these households now own homes.[9] Since home equity is a major source of retirement income in the NRRI, the decline in homeownership, combined with the decline in home values, has hurt minorities, and the story has been particularly bad for Hispanics who bought homes in the wrong place at the wrong time.[10]

Figure 7. Percentage of Households Ages 30-59 Owning a Home, by Race/Ethnicity, 2007 and 2016

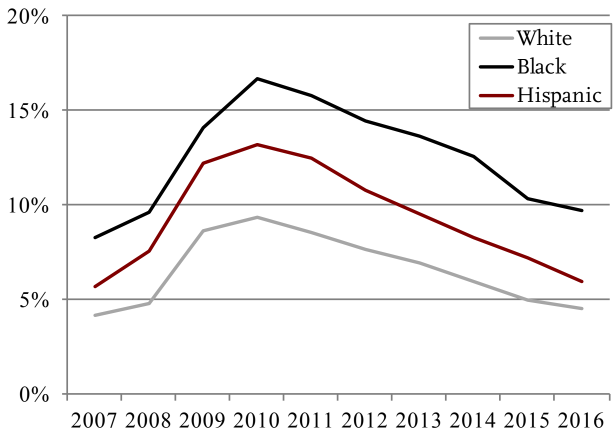


Sources: Authors' calculations from the SCF (2007, 2016).

Wage Growth

The lingering puzzle is why the NRRI for black households increased by less than for white households. As shown earlier, the NRRI for white households increased from 42 percent in 2007 to 48 percent in 2016; the comparable numbers for black households were 52 percent to 54 percent. Blacks were hit hard by the recession following the financial crisis. Their unemployment rate, which started at a relatively high level, reached 17 percent by 2010 (see Figure 8). Yet, something protected black households from serious deterioration in their retirement preparedness.

Figure 8. Unemployment Rate, by Race/Ethnicity, 2007-2016



Sources: Authors' calculations from the *Current Population Survey* (CPS) (2007-2016).

The story appears to be that Social Security replacement rates increased sharply in response to the collapse of earnings among black households at the bottom of the income distribution. By 2016, the median earnings for black households in the bottom quartile were only $11,700 compared to $20,000 for Hispanic households (see Table 5).

Table 5. Median Earnings for Households in the Lowest Income Quartile, by Race/Ethnicity, 2007-2016

Earnings	2007	2010	2013	2016
White	$22,000	$17,200	$16,100	$15,600
Black	19,300	17,200	14,800	11,700
Hispanic	22,300	21,500	21,400	20,000

Note: The lowest income quartile (which includes those with zero income) is for all U.S. households; these households are then divided by race/ethnicity.
Sources: Authors' calculations from the SCF (2007, 2016).

The collapse in earnings for low-income black households has boosted the Social Security replacement rates in the NRRI calculation (See Table 6). This increase, a result of Social Security's progressive benefit formula, appears to explain why the retirement readiness of black households held roughly steady.[11] Note that a steady NRRI does not mean that low-income black households will fare well in retirement. Their decline in earnings means that their pre-retirement standard of living is lower in 2016 than in 2007; and a roughly steady NRRI means simply that their risk of not being able to maintain that lower standard has not increased much.

Table 6. Average Social Security Replacement Rate, by Race/Ethnicity, 2007-2016

Race/ethnicity	2007	2010	2013	2016
White	36%	37%	37%	36%
Black	40	43	43	45
Hispanic	44	46	47	45

Source: Authors' calculations.

Conclusion

A shocking gap exists between the wealth holdings and incomes of white households on the one hand and black and Hispanic households on the other. Documenting that gap, however, says little about the retirement preparedness of these households. Retirement preparedness is typically defined as the risk of not being able to maintain a household's pre-retirement standard of living – a risk the NRRI is designed to capture. As it turns out, maintaining a low level of income with little wealth may not be that much more difficult than maintaining a high level of income with lots of wealth. A key reason is that Social Security, with its progressive benefit formula, boosts the replacement rates for low earners, which helps explain why the gap in the NRRI between blacks and whites has narrowed since the financial crisis and recession. Nothing could compensate, however, for the severe loss of housing wealth experienced by Hispanic households living in states hard hit by the bursting of the housing bubble. As a result, they face a much greater chance of being unable to maintain even their lower levels of pre-retirement income in retirement.

Endnotes

1 For the measures of retirement income and pre-retirement income, both mortgage debt and non-mortgage debt are subtracted from the appropriate income components.

2 For more on racial disparities in wealth, earnings, and other sources of income – including their underlying causes – see Shapiro, Meschede, and Osoro (2013), Sullivan et al. (2015), Brown (2016), White (2016), and Traub et al. (2016).

3 Other studies document a similar wealth pattern, such as Pew Research Center (2013), Kochhar and Fry (2014), Kochhar and Cilluffo (2017), and Dettling et al. (2017). Masterson et al. (2017) examine the changes in overall economic well-being by race/ethnicity.

4 For a more detailed look at the racial gap by different sources of household income (during a somewhat earlier period), see Monnat, Raffalovich, and Tsao (2012).

5 A report from the Pew Charitable Trusts (2016) shows similar plan participation rates. Even when Hispanics do participate in a retirement plan, Voya Retirement Research Institute (2012) finds that they are less likely than other participants to receive the full employer match.

6 The few workers in the private sector and the many in the public sector covered by defined benefit plans most likely saw no change in their promised benefits. While state and local governments did make cuts to their plans in the wake of the financial crisis, these cuts typically affect only new hires.

7 In addition, Goodman, Kaul, and Zhu (2017) find that Hispanics' overall financial situation is most vulnerable to a decline in house prices because their housing equity is a greater share of their total net worth than it is for for blacks or whites.

8 This finding is from Kochhar, Fry and Taylor (2011), who also included Michigan in their analysis of the hardest-hit states.

9 See Desilva and Elmelech (2012) for an analysis of the causes of racial/ethnic disparities in homeownership.

10 Krivo and Kaufman (2004) suggest another factor, unrelated to the recent economic cycle, that affects racial disparities in housing values; Hispanic and black homeowners experience slower appreciation in their house prices than do white homeowners.

11 Not surprisingly, given the wealth disparities discussed earlier, blacks – especially those in the lower part of the income distribution – tend to rely on Social Security for a much greater percentage of their retirement income than whites (Dushi, Iams, and Trenkamp, 2017).

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