

**Understanding Trends in the Retirement  
Preparedness of Black and Hispanic Households in  
the US: A Setback for Black Americans but  
Continued Progress for Hispanics**

**Edward N. Wolff**

**New York University and NBER**

**December 11, 2023**

# **Brief Summary of Major Findings**

- **1. Expected retirement income is based on four components: (i) standard non-pension wealth holdings, (ii) defined contribution (DC) pension holdings, (iii) actual or expected defined benefit (DB) pension entitlements, and (iv) actual or expected Social Security benefits.**
- **2. The first two components are converted into an annuity. All the data (except rates of return) for these calculations are available from the Survey of Consumer Finances (SCF).**
- **3. Results indicate that both Black and Hispanic households made remarkable progress in terms of mean and median retirement income, poverty reduction, and replacement rates from 1989 to 2007 in both absolute terms and relative to whites.**

# Summary (cont.)

- **4. However, for Black households, this was followed by a reversal of fortune from 2007 to 2019 with median retirement income declining, the poverty rate rising, and replacement rates falling, though mean retirement income rose.**
- **5. Hispanics also experienced a setback in mean retirement income but continued progress in median retirement income, replacement rates and reducing poverty from 2007 to 2019.**

# Literature Background

- **1. Measuring retirement adequacy is usually done by comparing predicted income at time of retirement with previous income (the so-called “replacement rate”). It should be noted that estimates of the replacement rate are quite sensitive to the choice of denominator. Some studies use family income at the time of the survey, others use a measure of permanent income, and still others use actual (or predicted) income as of the age just before retirement (as I do here).**
- **2. Calculations of retirement income adequacy typically relate retirement consumption to pre-retirement consumption in two possible ways. First, a household may be considered adequately prepared for retirement if it can maintain a similar real level of consumption as during its working years. Usually, 75 or 80 percent of pre-retirement income is thus considered adequate since the income needs of retirees are likely to be lower than those of workers (Aon Consulting 2001). Households no longer need to save for retirement, taxes are lower, work-related expenses disappear, the family size of retirees is smaller than that of workers, and households eventually pay off their debt (McGill, et al. 1996).**

# Literature Review (cont.)

- **3. Selected studies on retirement adequacy: (a) Fisher et al. (2005) using the US Consumer Expenditure Survey; (b) Scholz and Seshadri (2009) using the HRS; (c) Gustman and Steinmeier (1998) using the HRS; (d) Engen et al. (1999), using the SIPP and the SCF; (e) Moore and Mitchell (2000) using the 1992 HRS; (f) Wolff (2002) using the 1998 SCF; (g) Smith (2003) using the PSID and the CPS; (h) Sorokina et al. (2008), using data from the HRS; (i) Wolff (2011) on the basis of the 1989 and 2007 SCF; (j) Mitchell et al. (2021) using the HRS; (k) Center for Retirement Research CRR (2006), which develops what it calls “a new national retirement risk index” (NRRI) using the SCF; (l) Munnell et al. (2007 and 2021) using the SCF to calculate NRRI.**

# Literature Review (cont.)

- **(1) It is useful to compare an alternative approach to measuring retirement adequacy which comes from the Center for Retirement Research (2006) and which develops what it calls “a new national retirement risk index” (NRRI). The construction of the NRRI involves two steps. The first is to project replacement rates for each household and to determine a target replacement rate. The second step is to compare the projected replacement rates to the targets. Projected retirement income is based on income from financial assets, including those in defined contribution plans, net of non-mortgage financial debt, housing net of mortgage debt, defined benefit pension plans, and Social Security. The index does not include earnings from work.**
- **(2) Because elderly households generally consume less than working-age households, as the work cited above indicates, a replacement rate of less than 100 percent is used in the calculation of the target replacement rate. However, the report argues that the projected replacement rate should be higher for low income households in comparison to high income ones because low income households save very little before retirement and enjoy less in the way of tax savings**

# Literature Review (cont.)

- **(3) It is instructive to compare the methodology used by the Center for Retirement Research (CRR) and that used here in this paper. Both studies use four components to assess retirement security: (i) standard non-pension wealth holdings, including owner-occupied housing (ii) DC pension holdings, (iii) actual or expected DB pension benefits, and (iv) actual or expected Social Security benefits.**
- **(4) Both net out mortgage and non-mortgage debt in the calculation of net worth. Both approaches also project retirement income to age 65 by individual component and transform financial assets into a lifetime annuity in the calculation of projected retirement income.**
- **(5) One difference in methodology is that in the projection of financial assets to retirement, the CRR projections are based on wealth-to-income patterns by age group, originally based on the 1983-2004 SCF surveys. In contrast, in my approach, I project the value of financial assets on the basis of historical rates of return for these assets.**

# Literature Review (cont.)

- **(6) Second, for housing, the CRR projections use the rental value that homeowners receive from living in their home rent free and the amount of equity they could borrow from their housing wealth through a reverse mortgage. In my approach, I project the value of housing on the basis of its historical rate of return.**
- **(7) Third, I include two additional components in calculating the projected value of DC wealth: DCEMP or DCEMPW. The former is the projected accumulations in DC plans of future employer contributions, while the latter is the projected accumulations in DC plans of future employee contributions. Fourth, my work provides a decomposition of expected retirement income, poverty, and replacement rate by income source.**



# Methodology

- **1. Net worth.** The primary data sources used for this study are the 1989, 2001, 2007, and 2019 SCF. They are all expansionary years in the business cycle.
- **2. DB pension benefits.** For retirees, I use their actual reported DB benefit to compute retirement income. Among current workers, I use the actual formula reported in the SCF and projected earnings to year of retirement.
- **3. Social Security benefits.** For current Social Security beneficiaries, I use the Social Security benefit currently being received by the household as reported in the SCF. For current workers, on the basis of the person's earnings history, the person's Average Indexed Monthly Earnings (AIME) is computed. Then, on the basis of the rules current at the time of the survey year, the person's Primary Insurance Amount (PIA) is derived from AIME. The Social Security benefit is set to PIA.

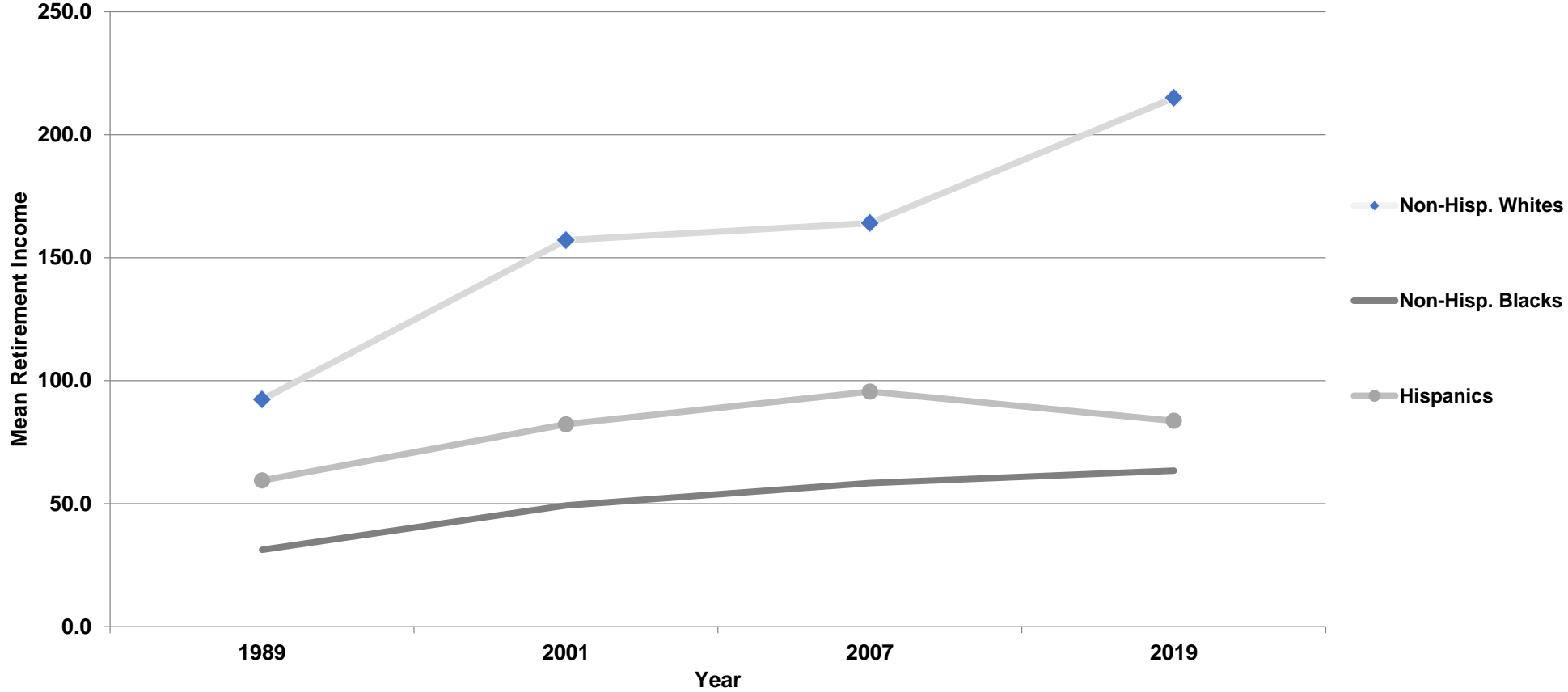
# Methodology (cont.)

- **4. The Accounting Framework. The accounting framework becomes:**
- **(1)  $DCEMP = DCEMP_a + DCEMP_b$**
- **where  $DCEMP_a$  and  $DCEMP_b$  are projections of the future stream of *employer* and *employee* contributions to DC accounts like 401(k) plans until the expected year of retirement. Total DC wealth is now given by:**
- **(2)  $DCTOT = DCW + DCEMP_a + DCEMP_b$**
- **and “non-pension” wealth  $NWX$  as marketable household wealth minus  $DCW$ :**
- **(3)  $NWX = NW - DCW$**
- **where  $DCW$  is current defined contribution plan wealth.**

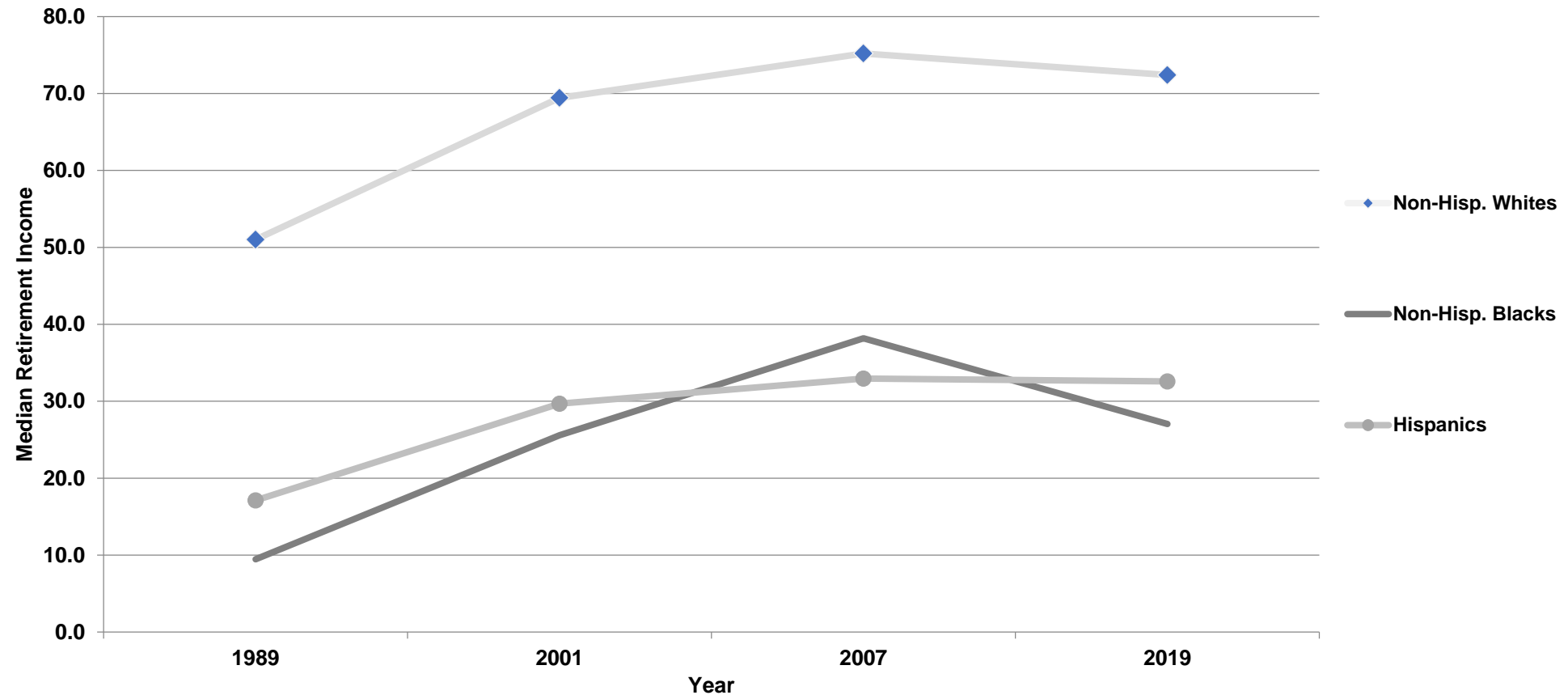
# Methodology (cont.)

- **5. I then convert NWX and DCTOT into an annuity equivalent (ANN) based on the formula:**
- **(4)  $ANN_i = r_i \cdot Asset_i / [1 - (1 + r_i)^{-\max(LERH, LERW)}]$**
- **where  $r_i$  is the rate of return on asset i, LERH is the life expectancy of the husband at year of retirement, and LERW is the life expectancy of the wife at year of retirement. Life expectancies are available by gender. In 1989 and 2001, they are available for two racial categories: whites and non-whites. In 2007 and 2019, they are available for three categories: non-Hispanic whites, non-Hispanic Blacks, and Hispanics. I categorize Asian-Americans with whites. An annuity is calculated for each asset (and debt) class based on the historical rate of return on that asset.**
- **6. I then add to current non-pension wealth holdings (NWX) and defined contribution plan holdings the estimated amount of additional wealth accumulations up to the time of retirement. This is based on the historical real rate of return of each asset type. I also estimate the future gains on DCTOT.**

# Results: Figure 1. Mean retirement income (in 1000s, 2019 dollars)



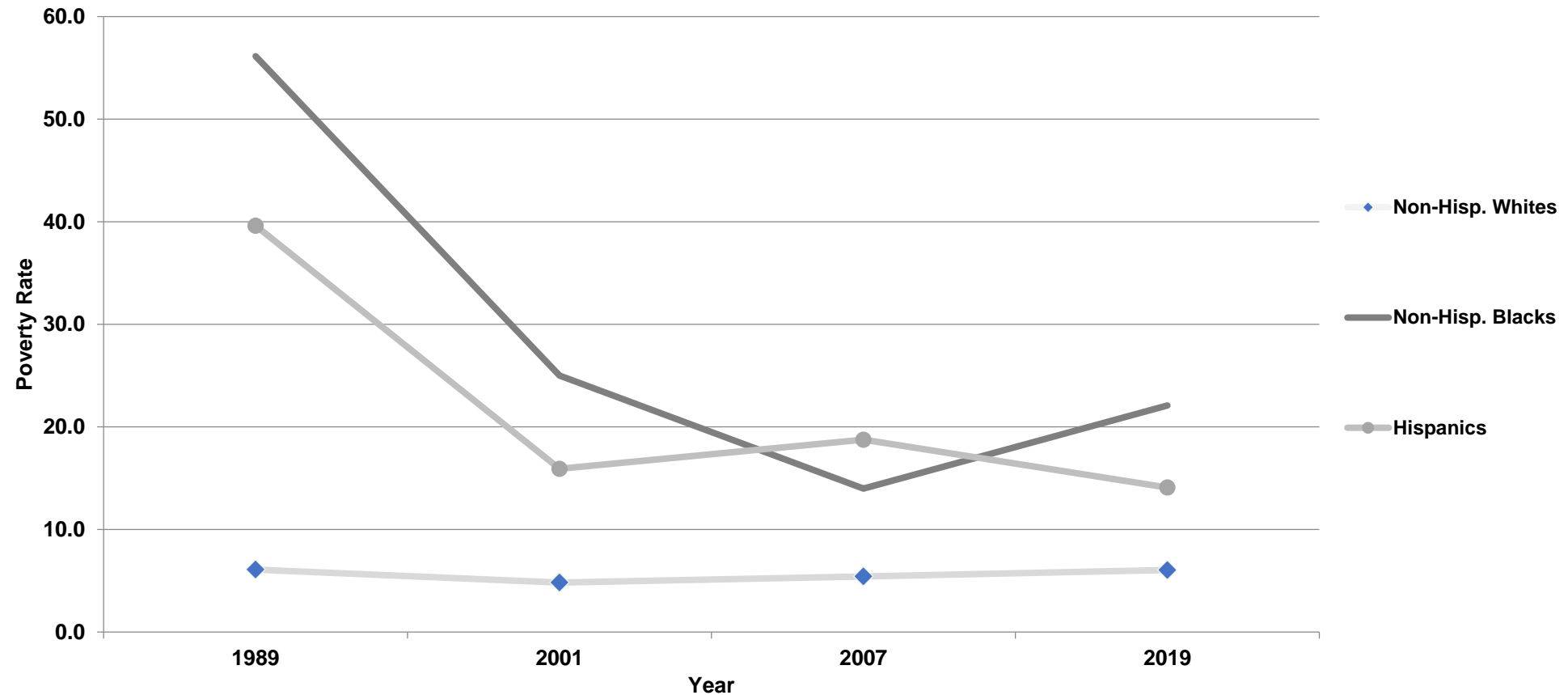
# Figure 2. Median retirement income (in 1000s, 2019 dollars)



# Table 1. Ratios of Mean and Median Retirement Income

	1989	2001	2007	2019
<b><u>Ratio of mean retirement income</u></b>				
<b>1. Black / white households</b>	<b>0.338</b>	<b>0.314</b>	<b>0.356</b>	<b>0.295</b>
<b>2. Hispanic / white households</b>	<b>0.644</b>	<b>0.524</b>	<b>0.582</b>	<b>0.389</b>
<b><u>Ratio of median retirement income</u></b>				
<b>1. Black / white households</b>	<b>0.185</b>	<b>0.368</b>	<b>0.508</b>	<b>0.374</b>
<b>2. Hispanic / white households</b>	<b>0.335</b>	<b>0.427</b>	<b>0.438</b>	<b>0.450</b>

# Figure 3. Percentage of Households with Expected Retirement Income Less Than the Poverty Line

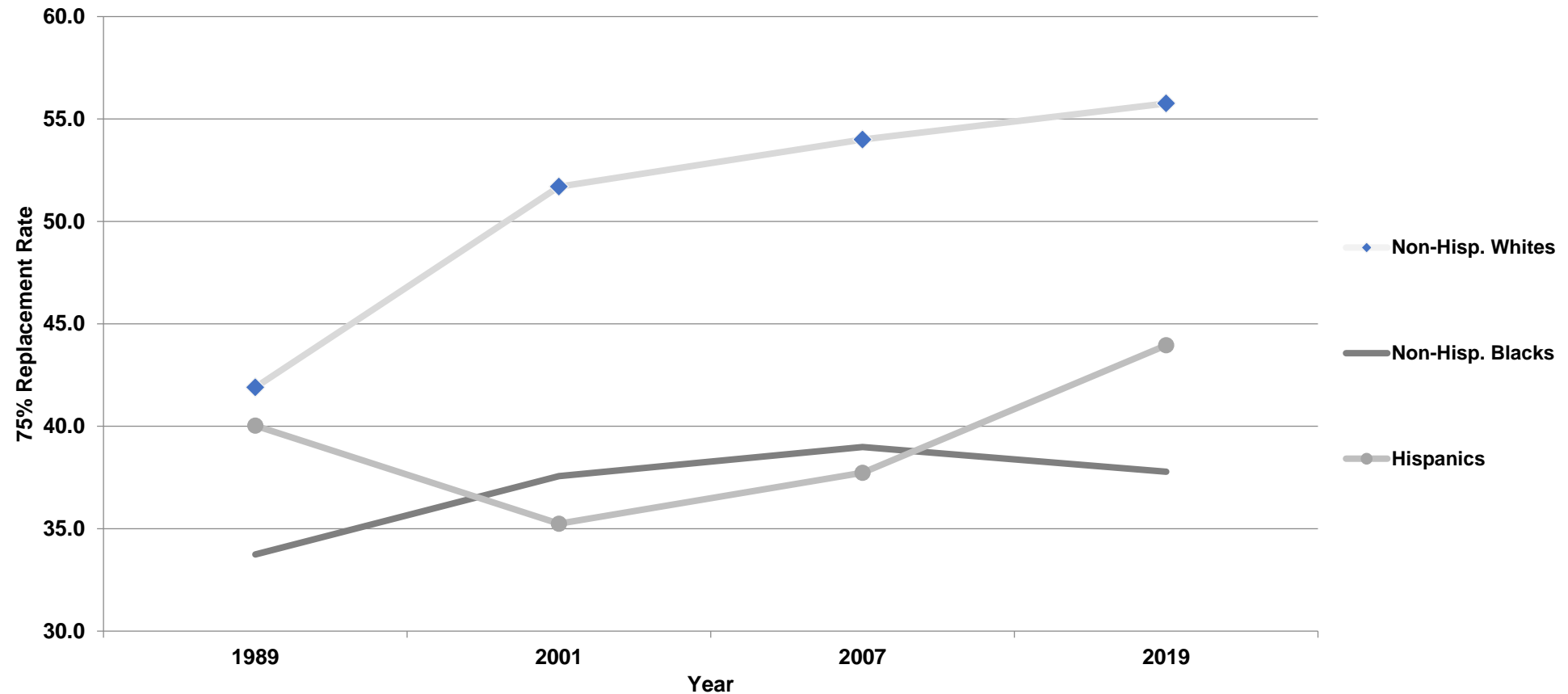


# Table 5. Racial/ethnic differences in expected poverty rates

	1989	2001	2007	2019
<b>Percent of Households with Expected Retirement Income Less Than the Poverty Line: Percentage point differences</b>				
<b>1. Black - white households</b>	<b>50.0</b>	<b>20.2</b>	<b>8.6</b>	<b>16.0</b>
<b>2. Hispanic - white households</b>	<b>33.5</b>	<b>11.1</b>	<b>13.3</b>	<b>8.0</b>



# Figure 4. Percentage of Households Meeting 75% Replacement Rate



## Table 5 (cont.). Racial/ethnic differences in percentage of households meeting 75% replacement rate

	1989	2001	2007	2019
<b><u>Percentage of Households Meeting 75% Replacement Rate: Percentage point differences</u></b>				
<b>1. White - black households</b>	<b>8.2</b>	<b>14.1</b>	<b>15.0</b>	<b>18.0</b>
<b>2. White - Hispanic households</b>	<b>1.9</b>	<b>16.5</b>	<b>16.3</b>	<b>11.8</b>

<b>Table 2. Composition of Expected Mean Retirement Income Based on Wealth Holdings and Expected Pension and Social Security Benefits, 1989-2019</b>						
<b>(In percentage)</b>						
	<b>Non-Home</b>					
	<b>Non-Pension</b>	<b>Home</b>				
	<b>Wealth</b>	<b>Equity</b>	<b>DC Plans</b>	<b>DB</b>	<b>Social</b>	
	<b>(FWX)</b>	<b>(HE)</b>	<b>(DCTOT)</b>	<b>Pensions</b>	<b>Security</b>	<b>Total</b>
<b><u>I. 1989</u></b>						
<b>1. All Households, Ages 47-64</b>	<b>37.6</b>	<b>12.9</b>	<b>10.2</b>	<b>20.5</b>	<b>18.8</b>	<b>100.0</b>
<b>2. Non-Hispanic white</b>	<b>39.3</b>	<b>12.5</b>	<b>10.8</b>	<b>19.3</b>	<b>18.1</b>	<b>100.0</b>
<b>3. Non-Hispanic Black</b>	<b>12.9</b>	<b>14.8</b>	<b>3.2</b>	<b>41.6</b>	<b>27.5</b>	<b>100.0</b>
<b>4. Hispanic</b>	<b>15.4</b>	<b>13.8</b>	<b>1.9</b>	<b>35.9</b>	<b>33.0</b>	<b>100.0</b>
<b><u>III. 2019</u></b>						
<b>1. All Households, Ages 47-64</b>	<b>43.9</b>	<b>9.9</b>	<b>27.0</b>	<b>5.1</b>	<b>14.0</b>	<b>100.0</b>
<b>2. Non-Hispanic white</b>	<b>46.7</b>	<b>9.7</b>	<b>26.7</b>	<b>4.4</b>	<b>12.4</b>	<b>100.0</b>
<b>3. Non-Hispanic Black</b>	<b>15.7</b>	<b>10.3</b>	<b>33.6</b>	<b>12.7</b>	<b>27.6</b>	<b>100.0</b>
<b>4. Hispanic</b>	<b>15.9</b>	<b>11.7</b>	<b>19.3</b>	<b>14.1</b>	<b>39.0</b>	<b>100.0</b>

**Table 3. Ratios in Expected Mean Retirement Income Based on Wealth Holdings and Expected Pension**

**and Social Security Benefits by Component, 1989-2019**

	<b>Non-Home Non- Pension Wealth (FWX)</b>	<b>Home Equity (HE)</b>	<b>DC Plans (DCTOT)</b>	<b>DB Pensions</b>	<b>Social Security</b>	<b>Total</b>
<b><u>I. 1989</u></b>						
<b>1. Black / white households</b>	<b>0.111</b>	<b>0.399</b>	<b>0.100</b>	<b>0.731</b>	<b>0.515</b>	<b>0.338</b>
<b>2. Hispanic / white households</b>	<b>0.252</b>	<b>0.708</b>	<b>0.111</b>	<b>1.201</b>	<b>1.176</b>	<b>0.644</b>
<b><u>III. 2019</u></b>						
<b>1. Black households / white households</b>	<b>0.099</b>	<b>0.314</b>	<b>0.372</b>	<b>0.846</b>	<b>0.655</b>	<b>0.295</b>
<b>2. Hispanic / white households</b>	<b>0.133</b>	<b>0.471</b>	<b>0.280</b>	<b>1.235</b>	<b>1.221</b>	<b>0.389</b>

**Table 6. Percentage of Households with Expected Retirement Income Less Than the Poverty Line, Based on Wealth Holdings and Expected Pension and Social Security Benefits, 1989-2019**

	<b>Non-Home</b>	<b>FWX plus</b>				<b>Total Expected</b>
	<b>Non-Pension</b>	<b>Half of Home</b>	<b>Non-Pension</b>	<b>NWX Plus</b>	<b>NWX Plus</b>	<b>Retirement</b>
	<b>Wealth</b>	<b>Equity</b>	<b>Wealth</b>	<b>DC Plans</b>	<b>All Pensions</b>	<b>Income:</b>
	<b>(FWX)</b>	<b>(HE)</b>	<b>(NWX)</b>	<b>(DCTOT)</b>	<b>(PW)</b>	<b>NWX + PW +</b>
						<b>Social Security</b>
<b><u>I. 1989</u></b>						
<b>1. All Households, Ages 47-64</b>	<b>80.5</b>	<b>73.7</b>	<b>60.2</b>	<b>52.0</b>	<b>33.4</b>	<b>14.7</b>
<b>2. Non-Hispanic white</b>	<b>77.1</b>	<b>70.0</b>	<b>54.9</b>	<b>45.7</b>	<b>25.7</b>	<b>6.1</b>
<b>3. Non-Hispanic Black</b>	<b>97.7</b>	<b>92.5</b>	<b>85.6</b>	<b>80.1</b>	<b>65.4</b>	<b>56.1</b>
<b>4. Hispanic</b>	<b>86.9</b>	<b>82.2</b>	<b>77.2</b>	<b>77.2</b>	<b>71.9</b>	<b>39.6</b>
<b><u>III. 2019</u></b>						
<b>1. All Households, Ages 47-64</b>	<b>76.1</b>	<b>66.6</b>	<b>54.9</b>	<b>37.7</b>	<b>34.4</b>	<b>9.5</b>
<b>2. Non-Hispanic white</b>	<b>71.3</b>	<b>60.3</b>	<b>47.4</b>	<b>29.7</b>	<b>26.7</b>	<b>6.0</b>
<b>3. Non-Hispanic Black</b>	<b>90.6</b>	<b>85.1</b>	<b>79.3</b>	<b>62.0</b>	<b>57.6</b>	<b>22.1</b>
<b>4. Hispanic</b>	<b>88.5</b>	<b>82.4</b>	<b>69.9</b>	<b>57.6</b>	<b>53.0</b>	<b>14.1</b>

<b>Table 7. Percent of Households with Expected Retirement Income Greater Than or Equal to 75 Percent of Projected Income at Age 64, Based on Wealth Holdings and Expected Pension and Social Security Benefits, 1989-2019</b>						
	<b>Non-Home</b>	<b>FWX plus</b>				<b>Total Expected Retirement</b>
	<b>Non-Pension</b>	<b>Half of Home</b>	<b>Non-Pension</b>	<b>NWX Plus</b>	<b>NWX Plus</b>	<b>Income:</b>
	<b>Wealth</b>	<b>Equity</b>	<b>Wealth</b>	<b>DC Plans</b>	<b>All Pensions</b>	<b>NWX + PW +</b>
	<b>(FWX)</b>	<b>(HE)</b>	<b>(NWX)</b>	<b>(DCTOT)</b>	<b>(PW)</b>	<b>Social Security</b>
<b><u>I. 1989</u></b>						
<b>1. All Households, Ages 47-64</b>	<b>4.3</b>	<b>5.5</b>	<b>8.2</b>	<b>10.2</b>	<b>20.5</b>	<b>40.7</b>
<b>2. Non-Hispanic white</b>	<b>5.1</b>	<b>6.5</b>	<b>9.4</b>	<b>12.0</b>	<b>21.2</b>	<b>41.9</b>
<b>3. Non-Hispanic Black</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>16.2</b>	<b>33.7</b>
<b>4. Hispanic</b>	<b>3.1</b>	<b>3.1</b>	<b>10.6</b>	<b>10.6</b>	<b>21.3</b>	<b>40.0</b>
<b><u>IV. 2019</u></b>						
<b>1. All Households, Ages 47-64</b>	<b>7.6</b>	<b>9.1</b>	<b>11.5</b>	<b>24.0</b>	<b>30.2</b>	<b>51.6</b>
<b>2. Non-Hispanic white</b>	<b>9.4</b>	<b>11.0</b>	<b>13.9</b>	<b>28.9</b>	<b>35.1</b>	<b>55.8</b>
<b>3. Non-Hispanic Black</b>	<b>2.0</b>	<b>2.7</b>	<b>3.7</b>	<b>9.4</b>	<b>15.7</b>	<b>37.8</b>
<b>4. Hispanic</b>	<b>3.5</b>	<b>5.1</b>	<b>6.5</b>	<b>11.3</b>	<b>17.5</b>	<b>44.0</b>

# Conclusions

- **1. Black households make substantial progress between 1989 and 2007. Their mean retirement income grows by 87 percent, their median retirement income is up by a factor of four, their expected poverty rate at retirement plummets by 42 percentage points from 56 to 14 percent, and the percentage of households with expected retirement income greater than or equal to 75 percent of their projected income at age 64 rises by five percentage points from 34 to 39 percent.**
- **2. Black households then experience a reversal of fortune from 2007 to 2019. Their median retirement income drops by 29 percent, their expected poverty rate at retirement spikes by 8 percentage points to 22 percent, and the share meeting the replacement standard falls by a percentage point, though their mean retirement income does rise by 9 percent.**
- **3. Why the reversal of fortune? Black families were hammered by the Great Recession, much more so than white families. Their mean and median net worth declined in absolute terms between 2007 and 2019. The Great Recession is in many ways the line of demarcation between the substantial headway made from 1989 to 2007 and the retrenchment after 2007.**

## Conclusions (Cont.)

- **4. In relative terms, the ratio of mean expected retirement income between Black and white families first shows a sizeable gain from 0.34 in 1989 to 0.36 in 2007 but then a pronounced retreat to 0.30 in 2019, even lower than in 1989. A similar pattern unfolds for the ratio of median retirement income, though the ratio is higher in 2019 than in 1989. The divergence after 2007 is mainly due to the much faster growth in the expected annuity from non-pension wealth among whites. This climbs by 38 percent, compared to 2 percent among Black households. It also accounts for 65 percent of the change in mean expected retirement income for whites, compared to only 5 percent for Black households.**
- **5. The gap in projected poverty rates between Black and white families likewise falls sharply from 1989 to 2007, from 50 percentage points to only 9 percentage points. Much of the decline in the Black poverty rate, both in absolute and relative terms, is traceable to the larger impact of Social Security on reducing Black poverty and another significant portion is from the accumulation of DC pensions. The pattern reverses by 2019, with the racial gap widening to 16 percentage points. In this case, the cause is the diminished effectiveness of non-pension wealth in reducing poverty in the Black community.**



## Conclusions (Cont.)

- 6. The percentage of households meeting the 75 percent replacement rate standard is higher for white than Black households, despite their higher pre-retirement income. As a result, there is a sizeable gap between whites and Black families, 8 percentage points in 1989 and 15 percentage points in 2007. The gap widens even further to 18 percentage points in 2019. Most of the gap comes from differences in the accumulation of non-pension wealth.