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Abstract

As the U.S. population becomes more diverse, it will be increasingly important for policymakers addressing Social Security's solvency to understand how reliant various racial and ethnic groups will be on the program versus other sources of retirement wealth. Yet, to date, studies on retirement wealth have tended not to focus on race and ethnicity, have largely ignored the role of Social Security, or have excluded the most recent cohort approaching retirement – the Late Boomers. This project uses data from the *Health and Retirement Study* (HRS) to document the retirement resources of white, black, and Hispanic households at various points in the wealth distribution for five HRS cohorts of 51-56 year olds between 1992 and 2016.

The paper found that:

- In 2016, the typical black household had 46 percent of the retirement wealth of the typical white household, while the typical Hispanic household had 49 percent.
- This inequality would be much higher but for the presence of Social Security – black households had just 14 percent of the non-Social Security retirement wealth when compared to white households, and Hispanic households had just 20 percent.
- The 1992 to 2010 HRS cohorts showed little change in retirement wealth inequality, although a decline in 51-56 year old white households' retirement wealth between 2010 and 2016 narrowed the racial and ethnic gaps in retirement wealth slightly.
- The progressivity of Social Security combined with lower average incomes for minority households means that replacement rates are more equal than wealth – in 2016, the replacement rate of black households was 82 percent of white households and Hispanic households was 95 percent.

The policy implications of the findings are:

- Across-the-board benefit cuts, such as increases in the Full Retirement Age, will have an outsize impact on black and Hispanic households' retirement wealth.
- As policymakers consider changes to the Social Security program to shore up its finances, considering ways to mitigate any impact on these groups may be important.

Introduction

Analyses of racial wealth inequality have long shown that black and Hispanic households have lower net worth than whites have. As a recent example, Dettling et al. (2017) found that both the typical black and the typical Hispanic household in 2016 had less than one-fifth the net worth of the typical white household. Furthermore, those authors note that this inequality may have worsened in the immediate aftermath of the Great Recession. Yet, no studies look at recent trends across these groups in the accumulation of *retirement* wealth – a broader indicator than net worth that includes annuitized sources of wealth such as Social Security and defined benefit (DB) pensions. This paper uses the *Health and Retirement Study* (HRS) to examine retirement wealth inequality across racial/ethnic groups at various points in the wealth distribution for five HRS birth cohorts: the original HRS, War Baby, Early-Boomer, Mid-Boomer, and Late-Boomer.

This task is important. Understanding the distribution of retirement wealth among various racial and ethnic groups can inform discussions of how addressing Social Security solvency may affect their retirement security. Reason exists to believe that both the level and trends in inequality will differ when examining retirement wealth versus net worth. On the level side, Social Security likely serves as an equalizing force, since its benefit formula is progressive and coverage is essentially universal. On the trend side, some authors have noted that defined contribution (DC) wealth tends to be more unequally distributed than DB wealth, meaning that retirees' increased reliance on DCs could also increase inequality.[1] Increases in the Social Security Full Retirement Age could have a similar effect, since minority households are more reliant on the program.[2]

To explore inequality in retirement wealth across racial/ethnic groups and over time, this paper calculates the household wealth of HRS respondents age 51-56 from all sources relevant to retirement, including: 1) Social Security; 2) employer-sponsored retirement plans (including DB plans); 3) non-DC financial wealth; and 4) housing wealth. Ages 51-56 are chosen because that is when the respondents in each new cohort enter the HRS, allowing the study to examine the most recent cohort in the HRS, the Late Boomers (born 1960-1964). Since the level of inequality may differ across the distribution, for example if both low-wealth white and black households rely primarily on Social Security and thus end up relatively equal, the paper presents

[1] See Devlin-Foltz, Henriques, and Sabelhaus (2016).
[2] For example, see HRS estimates from Dushi, Iams, and Trenkamp (2017).

calculations of retirement wealth for households in the middle of the distribution and within each quintile. Since the goal of retirement wealth is ultimately to replace a household's pre-retirement income, the paper also converts the estimates of wealth to income and calculates replacement rates. As far as we know, this paper is the first to examine racial inequality in retirement wealth and income for the full range of HRS Cohorts.[3]

The rest of the paper proceeds as follows. The next section outlines what is known about racial inequality in wealth generally and retirement wealth specifically. The third section discusses the data and methodology used to calculate retirement wealth and income across the various sources and cohorts. The fourth section discusses results, which suggest that retirement wealth inequality is lower than inequality in net worth, although black and Hispanic households still have less than half as much retirement wealth as white households. The main reason for the relatively equal distribution of retirement wealth is Social Security, which is by far the most evenly distributed source of retirement wealth and indeed the main source for middle-income minorities. The paper concludes that, as policymakers consider changes to the Social Security program that would bring it into fiscal balance, the distributional impact of any benefit cuts with respect to minority groups may be a worthy consideration.

Background

Although the literature on racial and ethnic inequality in wealth is sparser than the literature on disparities in income, a number of studies exist. However, the vast majority of these studies include only assets that can be readily turned into cash (e.g., bank deposits, housing, financial securities, etc.), but exclude important sources of retirement wealth like Social Security and DB pensions. For example, in an early study of individuals approaching retirement, Sobol (1979) found that black men had 13 percent of the assets of white men in savings accounts, stocks, bonds, mutual bonds, and housing, and business equity. In a later study that focused on younger households, Blau and Graham (1990) found that black households held 18 percent of the wealth of white households, with wealth including net liquid assets, net business assets, and equity in houses and cars.[4] More recently, Altonji and Doraszelski (2005) used the *Panel Study*

[3] Excluding the AHEAD and CODA Cohort, which entered the HRS at later ages.
[4] Blau and Graham (1990) point out that their estimate of an 18 percent ratio is in line with earlier work on the topic from Terrell (1971), Soltow (1972), and Smith (1975).

of Income Dynamics to report a slightly higher ratio of black to white wealth, at 25 percent, again focusing on measures of wealth that excluded Social Security and DB pensions.

While this paper is primarily concerned with documenting inequality in wealth, a few of the studies above also attempted to identify the source of the inequality, and those studies can help illustrate why the inclusion of Social Security and DB wealth could alter the picture. For example, the study by Altonji and Doraszelski finds that black households' wealth is lower than white households' both directly because they have lower incomes overall but also indirectly because their wealth accumulation is less sensitive to income, i.e., for black households higher income has a less positive effect on wealth than for white households.[5] The authors tentatively attribute this fact to lower savings rates conditional on income and lower rates of return due to the types of assets held, with lower rates of transfers from family also playing a role. Whatever the cause, Social Security and DB wealth eliminate much of the difference – both types of wealth represent forced savings that would have a similar rate of return across those with similar incomes. Furthermore, because Social Security is progressive, it also eliminates some of the direct effect of the fact that black households simply have lower incomes to start with.

Indeed, one of the most relevant recent papers on the topic of wealth inequality by Wolff (2018) finds that the inclusion of Social Security and DB wealth into the calculation greatly reduces the wealth gap between white households and both black and Hispanic ones (the studies mentioned above mostly focused on race, not ethnicity). That study used the *Survey of Consumer Finances* to show that black households had 14 percent the wealth of white households in 2016 and Hispanic households 19 percent when excluding Social Security and DB wealth. Those numbers rose to 27 and 28 percent, respectively, once these sources of annuitized wealth were included. Furthermore, that study looked at all households, not just those approaching retirement when Social Security and DB wealth have had more time to accumulate. One expects the effect of these two sources to be larger in this paper, which focuses on people age 51-56.

[5] Blau and Graham (1990) come to a similar conclusion – that it is not just lower income driving wealth gaps between black households and white ones, but also different accumulation of wealth conditional on income.

Data and Methodology

To estimate retirement wealth and income, the project will use 1992-2016 HRS data linked to SSA earnings and benefit records. This project takes advantage of two recent additions to the HRS to provide a more accurate, up-to-date picture of retirement wealth and income than has been provided by the literature to date. The first is revised information on employer-sponsored retirement plans, initiated in 2012 and applied to past waves as well.[6] The second is the addition of the Late-Boomer birth cohort (born 1960-1964) to the 2016 HRS, which was released in early 2019. To allow a comparison between this youngest cohort and the others, the project focuses on retirement wealth and income for households at ages 51-56 who join the HRS surveys in 1992, 1998, 2004, 2010 and 2016. The samples are separated into three racial/ethnic groups: 1) non-Hispanic white; 2) non-Hispanic black; 3) Hispanic (see Appendix Table A1 for sample tabulation.).[7]

The paper begins by calculating household wealth before turning to the issue of what share of a household's pre-retirement income that wealth will ultimately replace.

Calculating Household Wealth

As mentioned above, and in deviation from much of the literature, the wealth in this project includes all relevant sources of retirement wealth: 1) Social Security; 2) employer-sponsored retirement plans (including annuitized DB wealth); and 3) housing and financial wealth. The method for calculating each wealth component varies by type and is described below.

Social Security. The calculation of Social Security wealth is common in the literature, and this paper uses a calculation based on the methodology described in detail in Fang and Kapinos (2016).[8] The starting point for this calculation is the individual's annual Social Security benefit, which itself is a function of the individual's Average Indexed Monthly Earnings (AIME) and claiming age. The AIME calculation relies on a link between the publically available HRS

[6] Specifically, in 2012, respondents were asked to verify all past pension and retirement accounts reported. This paper uses this information to eliminate any disagreement between this verification process and earlier results. Practically, the effect of this improvement is relatively small, as discussed in Gustman, Steinmeier, and Tabatabai (2014).
[7] The age, race, and ethnicity for couples is defined as that of the household financial respondent in the HRS survey.
[8] Also see Gustman, Steinmeier, and Tabatabai (2014) or Fang, Brown and Weir (2016).

and the restricted SSA Summary and Detailed Earnings Data. For individuals who have yet to reach retirement age, future earnings are projected using a five-year weighted average of their past earnings, rolled forward each year (see Mitchell, Olson and Steinmeier, 2000 for a detailed description of the methodology).[9] The AIME and Primary Insurance Amount (PIA) are then calculated using the AnyPIA program (Office of the Actuary, v2015.1). For simplicity, and to reflect the reduction in wealth due to the increasing Full Retirement Age (FRA) across cohorts, this project assumes the same claiming age of 65 for all cohorts. Given the AIME and the assumed claiming age, each individual's Social Security benefit can be calculated.

The Social Security benefit is a source of income and this paper is concerned with wealth, so the next step is to convert this income stream to a measure of Social Security wealth. To accomplish this conversion, those benefit flows are used to calculate the expected present value (EPV) at age 65 discounted as in the formula below:

$$EPV_{65} = \sum_{t=65}^{120} P_t \; SSB_t \; (1 + r_t)^{(65-t)}$$

Where P_t are survival probabilities P_t from SSA life tables by birth year and sex, and r_t is the long-run projected interest rate from the SSA Trustee Report as of the year the individual first entered the HRS. Once the EPV at age 65 is calculated, it is further discounted back from age 65 to the age at the survey year. [10]

Although the above describes the calculation for an individual, if the respondent is married and eligible for auxiliary benefits, the benefit components are weighted by the appropriate survival probabilities and converted to EPV as described above. Therefore, the household total Social Security wealth at each HRS survey year is the sum of EPVs of individual retirement insurance benefit and any auxiliary benefits.[11] Since the SSA earnings records for the

[9] See Figure A1 for an examination of this methodology using the 1992 cohort, which *has* reached retirement age. In general, the methodology slightly over-predicts earnings, especially in the third quartile of the distribution. However, even these differences are relatively small.

[10] This calculation is not unique, and follows a methodology well established in the literature. For example, see Gustman, Steinmeier, and Tabatabai (2014) or Fang, Brown and Weir (2016). For a detailed methodological description, also see Fang and Kapinos (2016).

[11] In practice, this project calculates Social Security Wealth data in the same way as described in the RAND HRS Longitudinal File 2014 (V3) for waves 1992, 1998, 2004 and 2010, and provides different estimates of wealth only

newest HRS cohort are not available yet, this project calculates the Social Security wealth using imputed AIMEs for relevant respondents based on their demographic characteristics and the AIMEs of their counterparts in the 2010 HRS cohort.[12]

Finally, in order to facilitate the comparison of Social Security wealth to other wealth the household has accumulated as of ages 51 to 56, this project prorates it to reflect the earnings history upon the individual's entry into the HRS. To do that, Social Security wealth as of age 65 is multiplied by the ratio of AIME based on their full earnings history (including projected years if necessary) and their AIME as of the survey year.[13]

Employer-Sponsored Retirement Plans. For both DB and DC retirement plans, the calculation of wealth is based on self-reported data, although the line of questioning differs based on the type of plan an individual reports having.[14] Respondents who report having a DC plan, such as a 401(k) or 403(b), in either their current job or a previous one are asked for the account balance, including the value of employer and respondent contributions as well as accumulated investment returns. DC pension wealth is therefore simply the total balances of all accounts, plus the balance of any IRA accounts, if any exist.

DB wealth is based on self-reported estimates of pension income at the participant's expected retirement age. Similar to Social Security, it takes this expected income stream and calculates the expected present value of lifetime benefits – implicitly assuming the worker does not retire prior to their expected retirement age – discounting using annual survival probabilities and a rate of interest.[15] It then apportions those benefits between past and projected service,

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in cases where some update was possible, for example because new administrative data was available since the RAND last calculated Social Security wealth.

[12] Specifically, and following the imputation methodology in Mitchell, Olson and Steinmeier (2000), this project imputes the AIME using a hot deck procedure based on demographic characteristics such as age, gender, earnings and race/ethnicity. See Appendix Figure A2 for the performance of this methodology by comparing the imputed result for the households in 2010 cohort using their counterparts in 2006 cohort with their own administrative data.

[13] For cohorts that have yet to reach age 65, this ratio is imputed based on the households' race and age 51-56 estimated AIME.

[14] Respondents may not be fully aware of all the complexities of the pension benefit features and formulas associated with their plans. Therefore, the HRS also provides employer-produced descriptions of the pension formulas governing benefits, which could be evaluated using special software with their earnings histories. However, it is infeasible to use employer reported data because those data are not available for the latest HRS cohort. Gustman, Steinmeier, and Tabatabai (2010) compare self-reported with employer-reported plan. Their comparison reveals substantial misreporting but little evidence of systematic biases. For more detailed discussion, see Munnell et al (2016).

[15] As in Mitchell and Moore (1997) and Gustman, Steinmeier, and Tabatabai (2010).

based on self-reported years of tenure for past service and years from current age to expected retirement age for future service.

Non-DC Financial Wealth. Aside from wealth held in employer-sponsored DC plans, this project also considers other sources of financial wealth. Non-financial wealth is calculated as the sum of the appropriate wealth components including net value of stock, mutual funds, bonds and bond funds, the value of checking, savings, and money market accounts, certificates of deposit, and government savings bonds, excluding holdings of any of these assets held in DC plans such as 401k and IRAs and less debt. For households where debt exceeds wealth, the measure of non-DC financial wealth is allowed to be negative.

Housing Wealth. The final source of retirement wealth in this project is housing wealth. Housing wealth is the net value of the primary residence, which is calculated as the gross value of the primary residence less any relevant mortgages and home loans. For households where debt exceeds equity, housing wealth is allowed to be negative.

Calculating Replacement Rates

While wealth measures provide useful insights into trends in wealth inequality, the ultimate purpose of that wealth is to allow households to maintain their standard of living in retirement. Therefore, the project also calculates for each household the replacement rate, which is the ratio of the retirement income that could be generated by a household's retirement resources divided by its pre-retirement income. To calculate this ratio, retirement income is calculated by converting the wealth totals to annual flows by wealth types. For Social Security and DB wealth, this conversion involves prorating the annual benefit flows used above in the wealth calculation to reflect the accruals by ages 51-56. DC pensions and financial wealth are assumed to grow with the market rate of return until age 65 and then used to purchase a single-life immediate annuity with the market value. Although few households voluntarily annuitize wealth, annuities are a proxy for a sustainable withdrawal rate.[16] Household retirement income – the numerator in the replacement rate calculation – is the sum of incomes from all the resources.

[16] The annuity rate is the market annuity rate based on historical data from the Annuity Shopper (2016), which reports average male and female single life annuity rates for ages 60, 65, 70, and 75 at six-month intervals from 1986. This project linearly interpolates to obtain rates at other ages if necessary.

For the denominator, the project uses the average of the highest five years of significant earnings between 51 and 56, summed across members of a household when appropriate.[17]

Results

This section presents results, first for inequality in retirement wealth and then for inequality in subsequent replacement rates.

Inequality in Retirement Wealth

To examine inequality in retirement wealth, the discussion begins with the "typical" household – defined as the average within the middle quintile of the retirement wealth distribution – within each racial or ethnic group.[18] Because inequality in retirement wealth may vary across the distribution, the discussion next turns to inequality across the distribution.

Inequality among Typical Households. Table 1 shows average total retirement wealth and the ratio of black-to-white and Hispanic-to-white wealth in the middle of the distribution for the cohorts entering the HRS between 1992 and 2016 (the HRS, War Baby, Early-Boomer, Mid-Boomer, and Late-Boomer respectively). In 2016, the typical black household had 46 percent the retirement wealth of the typical white household. The number was 49 percent for Hispanic households. Interestingly, the 2016 cohort experienced a slight departure from the 1992 to 2010 cohorts, for whom both the black-to-white retirement wealth ratio and the Hispanic-to-white ratio typically hovered in the upper-30 to lower 40-percent range. Unfortunately, the lower level of inequality stems mostly from a decline in white households' retirement wealth between 2010 and 2016 – their retirement wealth fell 19.5 percent, compared with only 4.5 percent and 4.2 percent declines for black and Hispanic households respectively.

Although Table 1 suggests considerable inequality in retirement wealth, it is worth noting that the inequality is much less extreme than discussed in the background section, where black households had somewhere between 10 percent and 25 percent of the wealth of white

[17] We follow Goss et al. (2014) in defining earnings in excess of $100 a year as significant. If the household has substantial earnings in less than five years, the average is based on the number of years available. Again, for 2016 the average earnings for the last 5-years must be imputed until administrative data are available on the late-boomer cohort. For now, results are based on imputations using current earnings, education, race, and marital status.
[18] A slightly more common approach would be to simply show the median retirement wealth. However, when looking by specific source of income, as is done below, the median is often zero. This fact is especially true for minority households.

households. Tables 2a through 2e show the level of inequality by source and clarify the reason for the relative equality of retirement wealth – the addition of Social Security. When examining Social Security wealth, both black and Hispanic households in 2016 had about three-quarters the wealth of their white counterparts, a number that was relatively consistent throughout the period examined. The comparable numbers for DB (Table 2b) and DC (Table 2c) retirement plans were less than 20 percent over the entire time period. Housing wealth (Table 2d) was also fairly unequally distributed, with ratios of 18 percent for black households and 36 percent for Hispanics. One thing worth noting about table 2d is the disturbing trend in housing wealth for black households, with their absolute wealth falling by about half between 1992 and 2016. Given that housing wealth is often the major source of non-Social Security wealth for middle-income households, this trend merits further study. Finally, non-DC financial wealth (Table 2e) was low for all groups, but actually *negative* for the typical minority household in 2016, with debt cancelling out any holdings.

Tables 2c and 2d also offer some insight into why white households' retirement wealth dropped so much between 2010 and 2016 – reductions of 19.5 percent and 22.7 percent in DC and housing wealth, respectively. Given that this drop occurred in the aftermath of the recession and only in one year of data, it is impossible to say whether this result is a trend or a blip. Indeed, the *Survey of Consumer Finances* suggests a smaller drop of just 5 percent in net worth (i.e., ignoring Social Security and DB wealth) for the typical white household. Future research should keep an eye on whether any trend exists.

With respect to trends in the inequality of these sources over time, Figures 1a and 1b lay out the trends for Social Security, employer-sponsored plans, non-DC financial wealth, and housing wealth for black and Hispanic households relative to white households respectively. Three takeaways emerge from this figure. The first is that Social Security has always been the most equally distributed source of wealth and by a fairly wide margin. The second is that for black households in particular, relative wealth in employer-sponsored plans has fallen as DC plans have become the norm – with the ratio relative to white households falling from 23 percent to 15 percent – consistent with findings from the earlier literature.[19] The third and final point is that housing wealth became more unequal immediately after the 2010 the recession, with black and Hispanic households suffering losses relative to white households due to a loss of housing

[19] Again, see Devlin-Foltz, Henriques, and Sabelhaus (2016).

wealth, but by 2016 those relative losses disappeared as whites saw larger declines. The next question is what the story looks like at other points in the distribution.

Inequality across the Distribution. Table 3 lays out estimates of retirement wealth for households age 51-56 across five within race/ethnicity retirement wealth quintiles in 2016 (results for other years are similar and available upon request). The results suggest a slight divergence across the racial/ethnic groups. For black households things become somewhat more equal above the lowest quintile, whereas for Hispanic households no such trend exists. For example, the black households in the lowest quintile have 23 percent of the retirement wealth of the poorest white households, whereas as the number is 49 percent for the highest quintile. For Hispanics, the poorest have 42 percent of the retirement wealth of white households, the richest 43 percent. To put it differently, low-wealth black households have just 55 percent of the income of low-wealth Hispanic households, and are by far the most vulnerable group in terms of retirement wealth.

Tables 4a to 4e show that this vulnerability stems from low Social Security wealth combined with a lack of other retirement wealth. Black households in the bottom quintile have Social Security wealth (Table 4a) of just $30,900 – about 35 percent of that of white households. This low level of Social Security wealth matters a lot for this group, since the sum of its other sources of retirement wealth is negative – housing and financial debt outweighs the group's meager wealth in employer-sponsored plans. To drive home this point, Figure 2 shows how dependent each racial/ethnic group is on Social Security based on its position in that group's retirement wealth distribution and shows that at all points, minority groups are more reliant on the program. The reliance on Social Security wealth makes it all the more important for future research to disentangle the role of factors like discrimination and educational inequality in dictating why the bottom fifth of black workers fail to accumulate substantial Social Security wealth.

While Social Security wealth is more unequal at the bottom of the distribution, Table 4a also shows that it is quite equal at the top end of the distribution – the Social Security wealth ratio, compared with white households, is three-quarters for both black and Hispanic households, similar to in the middle of the distribution. The problem is that non-Social Security wealth is still quite unequal. The ratio of non-Social Security wealth for black-to-white households in

their race-specific highest quintile is 45 percent. The comparable number for Hispanic-to-white households is 38 percent. The fact that Social Security wealth is relatively equal and non-Social Security wealth unequal drives home a point made in the background section above: even conditional on having similar Social Security benefits and similar lifetime incomes, wealth accumulates more slowly for minority households. The final question is how these lower levels of wealth translate to replacement rates.

Inequality in Replacement Rates

Table 5 shows how replacement rates have evolved over five cohorts for the typical household by race and ethnicity. The basic point is that inequality in retirement wealth does not translate to the same amount of inequality in replacement rates. In 2016, the typical white household had a replacement rate of about 51 percent based on income from retirement wealth and the average highest last five years of earnings as of age 51-56. The typical black and Hispanic households were at 42 percent and 48 percent respectively. So, compared to white households, replacements for black households were 82 percent and Hispanic households 95 percent – much more equal than retirement wealth itself.[20] The reason for this relative equality is inequality in income. For example, in 2016, the typical household earnings from the denominator of the replacement rate for white households was $69,200 – it was $41,650 for black households and $37,700 for Hispanic households.

Conclusion

The typical black household has just 45 percent the retirement wealth of the typical white households, with Hispanic households doing slightly better at 49 percent. But this inequality is still less extreme than inequality in measures of wealth that ignore annuitized sources like Social Security and DB pensions. The reason is simple: Social Security is the most equal and most important form of retirement wealth for most minority households. In 2016, black households had just 14 percent the non-Social Security wealth of white households and Hispanic households just 20 percent, but 74 percent and 75 percent the Social Security wealth. In the near future, as

[20] The pattern is similar if housing wealth – which is seldom annuitized – is excluded from the calculation. For example, in 2016 the replacement rates were 44 percent, 39 percent, and 44 percent for white, black, and Hispanic households respectively. So while the overall levels were lower, the relative equality of replacement rates compared to retirement wealth held.

policymakers begin to consider options to bring the Social Security program into fiscal balance, it may be worth considering the effect of any changes on the distribution of retirement wealth. Policies that would reduce benefits – such as increases in the Full Retirement Age – would tend to increase retirement wealth inequality and would have a larger adverse impact on minority households.

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Table 1. *Average Retirement Wealth at Age 51-56 for Middle Quintile Households within Race/Ethnicity by HRS Entry Cohort, 2016 Dollars*

	HRS cohort				
	1992	1998	2004	2010	2016
Race/ethnicity	HRS	War Baby	Early Boomer	Mid Boomer	Late Boomer
White	$449,100	$525,600	$520,200	$469,500	$377,800
Black	177,200	207,100	173,700	180,800	172,700
Hispanic	155,500	248,700	226,500	194,100	186,000
Wealth ratios					
Black-to-white	39%	39%	33%	39%	46%
Hispanic-to-white	35	47	44	41	49

Source: Authors' calculations from *Health and Retirement Study* (HRS) (1992-2016).

Table 2a. *Average Social Security Wealth at Age 51-56 for Middle Quintile Households within Race/Ethnicity by HRS Entry Cohort, 2016 Dollars*

	HRS cohort				
	1992	1998	2004	2010	2016
Race/ethnicity	HRS	War Baby	Early Boomer	Mid Boomer	Late Boomer
White	$193,900	$233,500	$223,000	$229,900	$200,900
Black	122,700	158,100	123,300	157,600	148,400
Hispanic	111,600	185,000	151,000	150,300	151,000
Wealth ratios					
Black-to-white	63%	68%	55%	69%	74%
Hispanic-to-white	58	79	68	65	75

Source: Authors' calculations from HRS (1992-2016).

Table 2b. *Average DB Pension Wealth at Age 51-56 for Middle Quintile Households within Race/Ethnicity by HRS Entry Cohort, 2016 Dollars*

	HRS cohort				
	1992	1998	2004	2010	2016
Race/ethnicity	HRS	War Baby	Early Boomer	Mid Boomer	Late Boomer
White	$81,200	$72,000	$71,100	$42,800	$21,800
Black	18,900	13,800	12,600	5,800	3,700
Hispanic	9,100	19,100	16,100	1,600	800
Wealth ratios					
Black-to-white	23%	19%	18%	14%	17%
Hispanic-to-white	11	27	23	4	4

Source: Authors' calculations from HRS (1992-2016).

Table 2c. *Average DC Wealth at Age 51-56 for Middle Quintile Households within Race/Ethnicity by HRS Entry Cohort, 2016 Dollars*

	HRS cohort				
	1992	1998	2004	2010	2016
Race/ethnicity	HRS	War Baby	Early Boomer	Mid Boomer	Late Boomer
White	$32,500	$66,300	$76,800	$73,800	$59,400
Black	6,700	5,300	13,000	6,100	8,400
Hispanic	4,100	9,000	7,700	13,700	8,400
Wealth ratios					
Black-to-white	21%	8%	17%	8%	14%
Hispanic-to-white	13	14	10	19	14

Source: Authors' calculations from HRS (1992-2016).

Table 2d. *Average Net Housing Wealth at Age 51-56 for Middle Quintile Households within Race/Ethnicity by HRS Entry Cohort, 2016 Dollars*

	HRS cohort				
	1992	1998	2004	2010	2016
Race/ethnicity	HRS	War Baby	Early Boomer	Mid Boomer	Late Boomer
White	$104,700	$104,500	$111,500	$104,100	$80,500
Black	28,700	29,700	22,900	14,800	14,300
Hispanic	29,400	42,100	47,800	29,500	29,000
Wealth ratios					
Black-to-white	27%	28%	21%	14%	18%
Hispanic-to-white	28	40	43	28	36

Note: Housing wealth is equity net of mortgage debt.
Source: Authors' calculations from HRS (1992-2016).

Table 2e. *Average Non-DC Financial Wealth at Age 51-56 for Middle Quintile Households within Race/Ethnicity by HRS Entry Cohort, 2016 Dollars*

	HRS cohort				
	1992	1998	2004	2010	2016
Race/ethnicity	HRS	War Baby	Early Boomer	Mid Boomer	Late Boomer
White	$36,800	$49,300	$37,800	$18,900	$15,300
Black	100	200	1,900	-3,500	-2,000
Hispanic	1,300	-6,600	3,900	-1,000	-3,200
Wealth ratios					
Black-to-white	0%	0%	5%	N/A%	N/A%
Hispanic-to-white	4	N/A	10	N/A	N/A

Note: "N/A" indicates that the wealth ratio was negative due to debt in excess of wealth among minority households.
Source: Authors' calculations from HRS (1992-2016).

Table 3. *Average Retirement Wealth at Age 51-56 for Households by Quintile of Wealth within Race/Ethnicity for Late Boomers, 2016 Dollars*

	Within race/ethnicity retirement wealth quintile				
Race/ethnicity	Bottom quintile	Second quintile	Third quintile	Fourth quintile	Highest quintile
White	$88,900	$216,600	$377,800	$750,300	$1,873,700
Black	20,600	96,700	172,700	306,100	915,800
Hispanic	37,400	110,900	186,000	302,200	802,700
Wealth ratios					
Black-to-white	23%	45%	46%	41%	49%
Hispanic-to-white	42	51	49	40	43

Source: Authors' calculations from HRS (1992-2016).

Table 4a. *Average Social Security Wealth at Age 51-56 for Households by Quintile of Wealth within Race/Ethnicity for Late Boomers, 2016 Dollars*

	Within race/ethnicity retirement wealth quintile				
Race/ethnicity	Bottom quintile	Second quintile	Third quintile	Fourth quintile	Highest quintile
White	$88,800	$165,900	$200,900	$222,700	$262,800
Black	30,900	92,000	148,400	169,900	191,100
Hispanic	44,400	104,700	151,000	179,000	196,800
Wealth ratios					
Black-to-white	35%	55%	74%	76%	73%
Hispanic-to-white	50	63	75	80	75

Source: Authors' calculations from HRS (2016).

Table 4b. *Average DB Pension Wealth at Age 51-56 for Households by Quintile of Wealth within Race/Ethnicity for Late Boomers, 2016 Dollars*

	Within race/ethnicity retirement wealth quintile				
Race/ethnicity	Bottom quintile	Second quintile	Third quintile	Fourth quintile	Highest quintile
White	$1,000	$5,900	$21,800	$94,000	$273,700
Black	0	3,700	3,700	20,100	138,600
Hispanic	2,800	0	800	15,000	168,900
Wealth ratios					
Black-to-white	0%	63%	17%	21%	51%
Hispanic-to-white	280	0	4	16	62

Source: Authors' calculations from HRS (2016).

Table 4c. *Average DC Wealth at Age 51-56 for Households by Quintile of Wealth within Race/Ethnicity for Late Boomers, 2016 Dollars*

	Within race/ethnicity retirement wealth quintile				
Race/ethnicity	Bottom quintile	Second quintile	Third quintile	Fourth quintile	Highest quintile
White	$3,400	$11,000	$59,400	$193,200	$523,800
Black	300	4,400	8,400	37,200	273,100
Hispanic	1,600	1,700	8,400	31,300	139,200
Wealth ratios					
Black-to-white	9%	40%	14%	19%	52%
Hispanic-to-white	47	15	14	16	27

Source: Authors' calculations from HRS (2016).

Table 4d. *Average Housing Wealth at age 51-56 for Households by Quintile of Wealth within Race/Ethnicity for Late Boomers, 2016 Dollars*

	Within race/ethnicity retirement wealth quintile				
Race/ethnicity	Bottom quintile	Second quintile	Third quintile	Fourth quintile	Highest quintile
White	$4,200	$38,800	$80,500	$179,100	$433,000
Black	800	4,500	14,300	77,700	224,600
Hispanic	-3,500	5,500	29,000	72,100	225,600
Wealth ratios					
Black-to-white	19%	12%	18%	43%	52%
Hispanic-to-white	N/A	14	36	40	52

Note: "N/A" indicates that the wealth ratio was negative due to mortgage debt in excess of housing equity among minority households.
Source: Authors' calculations from HRS (2016).

Table 4e. *Average Non-DC Financial Wealth at Age 51-56 for Households by Quintile of Wealth within Race/Ethnicity for Late Boomers, 2016 Dollars*

	Within race/ethnicity retirement wealth quintile				
Race/ethnicity	Bottom quintile	Second quintile	Third quintile	Fourth quintile	Highest quintile
White	-$8,500	-$5,000	$15,300	$61,300	$380,600
Black	-11,500	-7,800	-2,000	1,200	88,400
Hispanic	-7,900	-1,000	-3,200	4,900	72,200
Wealth ratios					
Black-to-white	--%	--%	N/A%	2%	23%
Hispanic-to-white	--	--	N/A	8	19

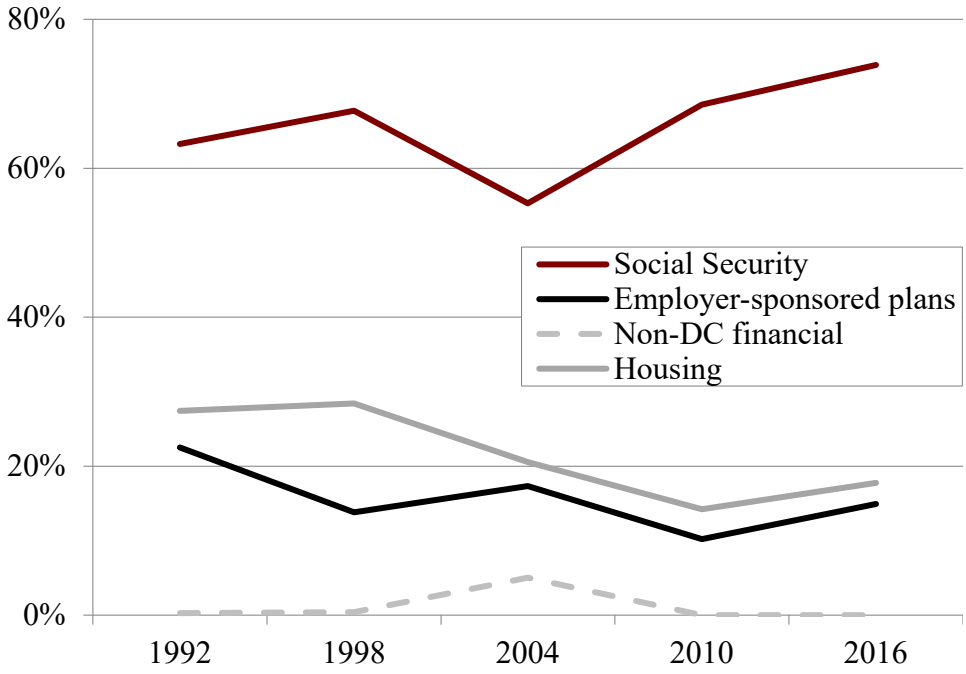
Notes: "--" indicates both white and minority households had debt in excess of wealth. "N/A" indicates that the wealth ratio was negative due to debt in excess of wealth among only minority households.
Source: Authors' calculations from HRS (2016).

Table 5. *Average Replacement Rate at Age 51-56 for Middle Quintile Households within Race/Ethnicity by HRS Entry Cohort, 2016 Dollars*

	HRS cohort				
	1992	1998	2004	2010	2016
Race/ethnicity	HRS	War Baby	Early Boomer	Mid Boomer	Late Boomer
White	53%	63%	65%	58%	51%
Black	35	39	39	39	42
Hispanic	29	49	49	46	48

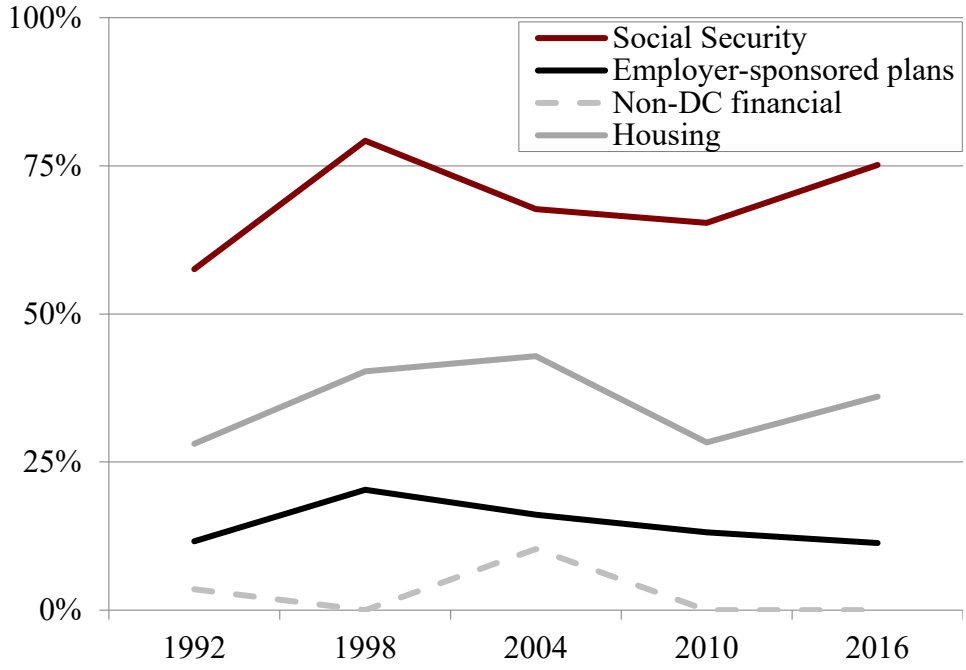
Source: Authors' calculations from HRS (1992-2016).

Figure 1a. *Ratio of Black-to-white Retirement Wealth at Age 51-56 by Source, 2016 Dollars*



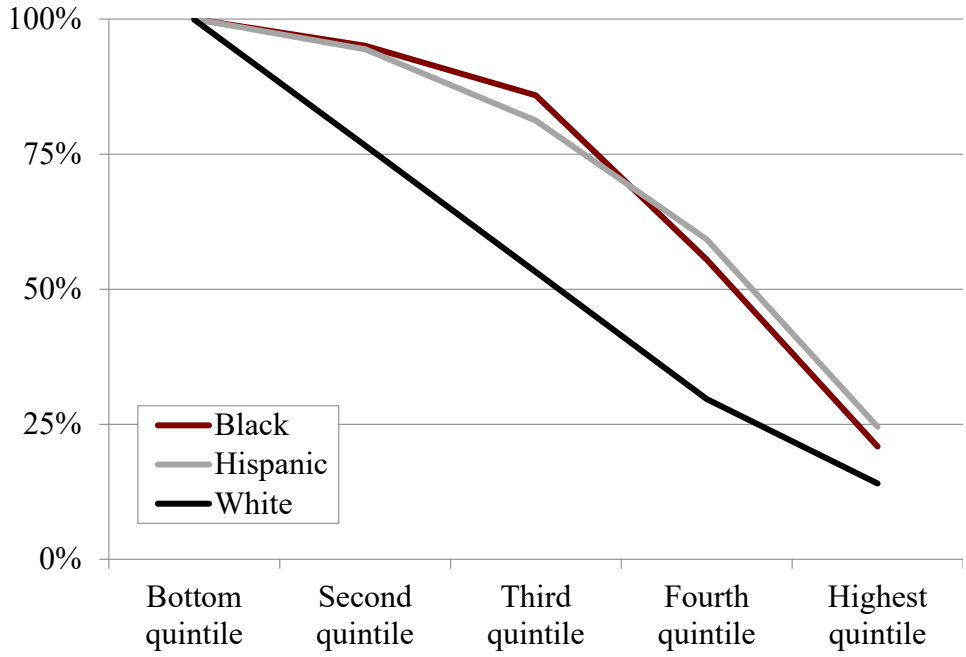
Note: Cases where the typical minority household has negative housing or non-DC financial wealth appear as 0.
Source: Authors' calculations from HRS (1992-2016).

Figure 1b. *Ratio of Hispanic-to-white Retirement Wealth at Age 51-56 by Source, 2016 Dollars*



Note: Cases where the typical minority household has negative housing or non-DC financial wealth appear as 0.
Source: Authors' calculations from HRS (1992-2016).

Figure 2. *Share of Retirement Wealth from Social Security at Age 51-56 by Racial/Ethnic Group and Wealth Quintile within Race/Ethnicity*



Note: When wealth from non-Social Security Sources was negative, as it was for both minority groups, the ratio was capped at 1.
Source: Authors' calculations from HRS (2016).

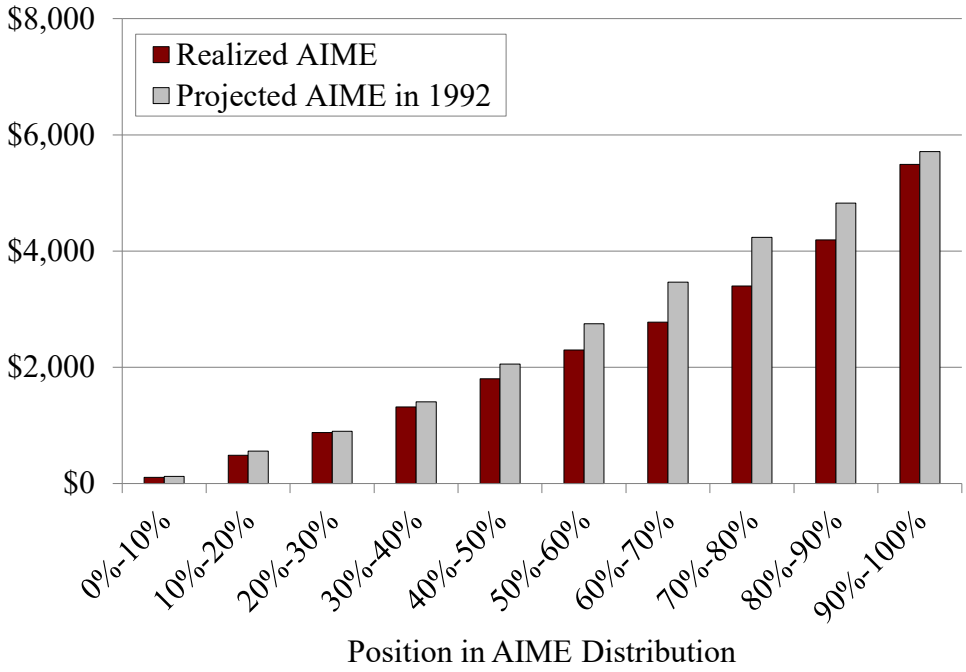
Appendix

Table A1. *Sample Size by HRS Cohort and Race/Ethnicity*

	1992	1998	2004	2010	2016
White	2,376	1,090	1,305	1,495	1,201
Black	678	263	401	981	870
Hispanic	358	124	308	610	620
Total	3,412	1,477	2,014	3,086	2,691

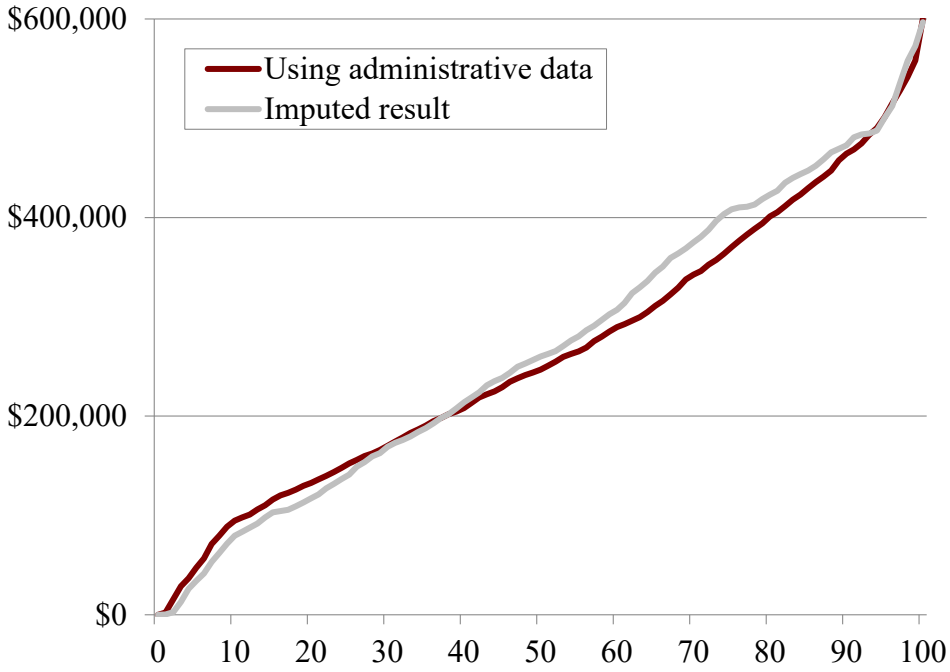
Source: Authors' calculations from HRS (1992-2016).

Figure A1. *Comparison of AIME Projected at Ages 51-56 and Actual Realized AIME at Age 65, 1992 Cohort*



Source: Authors' calculations from HRS (1992-2016).

Figure A2. *Comparison of Social Security Wealth based on Administrative Data versus the Imputation Methodology, 2010 Cohort*



Source: Authors' calculations from HRS (2006 and 2010).

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