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ABSTRACT

Using the Survey of Consumer Finances, I find that the Black/white gap in standard net worth widened from 1989 to 2019 but narrowed between Hispanics and (non-Hispanic) whites. When the definition of wealth is expanded to incorporate Social Security and defined benefit pension wealth (both the discounted sum of future benefits), the wealth gap is sharply reduced, especially for the ratio of median wealth. The Black/white and Hispanic/white disparity in Social Security wealth lessened considerably over 1989-2019. In contrast, the Black/white ratio of mean augmented wealth showed no change, though the ratio of median augmented wealth progressed. The Hispanic/white ratio of both mean and median augmented wealth advanced as well. The COVID-19 Pandemic struck in 2020 and hit the minority community much harder than whites in terms of mortality rates. Besides claiming over a million lives overall, it lopped off 4.7 percent of Social Security wealth among whites, 11.5 percent among Blacks, and 13.1 percent among Hispanics. As a result, while mean augmented wealth dipped only 1.2 percent among whites, it fell 6.7 percent among Black households and 7.3 percent among Hispanics. The effect was even stronger on median values – declines of a 2.6, 9.3 and 12.1 percent, respectively.

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One of the principal manifestations of structural racism is in the mortality differential between blacks and whites. This is due to more limited access to health care, lower quality health care, higher poverty, less education, neighborhood effects, and life style differences. Recently, this was reflected in the substantial racial morbidity and mortality gap resulting from the Covid-19 Pandemic. While the racial mortality gap has lessened over time, from the 1980s to 2019 according to Centers for Disease Control and Prevention (CDC) figures, the most recent evidence (for 2020) indicates a sharp widening of the differential during the Covid-19 Pandemic – indeed, to 7.0 years between white and Black males and to 4.7 years between white and Black females.

Disparities in mortality rates play a key role in accounting for the gap in defined benefit pension wealth and Social Security wealth since in their calculation future benefits are weighted by survival rates in each year. As shown in Wolff (2022), the racial gap in augmented wealth (AW) is much smaller than that in net worth (NW), where AW is defined as the sum of net worth, defined benefit pension wealth (DBW), and Social Security wealth (SSW). DBW is defined as the present value of expected future pension benefits weighted by survival probabilities and analogously SSW is defined as the present value of expected future Social Security benefits the family may receive upon retirement weighted by survival probabilities. Both are key determinants of family well-being and, in particular, retirement adequacy. In 2016, while the ratio in mean NW between Blacks and whites was 0.14 and that in median NW even lower at 0.02, the ratio in mean AW was 0.27 and that in median AW was also 0.27. The ratio in mean DBW and mean SSW were even higher, at 0.50 and 0.60, respectively. So whereas the racial gap in retirement wealth is notably smaller than that in net worth, it is still quite large by any reasonable standard.

As noted above, disparities in mortality rates play a key role in accounting for the gap in DBW and SSW. The other factors are the individual's coverage status and earnings history. This paper will provide estimates of DBW and SSW from 1989 to 2019 and then update them to 2020 on the basis of the most recent CDC estimates of mortality rates by race during the Pandemic. The paper's main contribution is to analyze how much of the differential in these two key wealth components and augmented wealth in general is ascribable to racial disparities in life expectancies. A decomposition analysis is then performed of the racial wealth gap into (i) mortality rate differentials and (ii) a residual which reflects differences in earnings history and coverage.

The primary data sources used for this study are the 1989, 2001, 2007, and 2019 Survey of Consumer Finances (SCF).[1] I use these years for two reasons. First, the SCF survey was conducted in these years. Second, they are all expansionary years in the business cycle. The analysis is conducted for all households and for three age groups (i) under age 47, (ii) ages 47-64, and (iii) ages 65 and over. It also considers the effect of the lessening of the mortality gap from 1989 to 2019 and its recent sharp increase in 2020 on the trend in the wealth gap over time.

On the policy front, one possible amelioration for the differential in Social Security wealth is to adjust the calculation of PIA (the formula used to compute the benefit level) to reflect racial differences in mortality rates. This policy option as well as several others are evaluated in the final section of the paper.

2. Previous Literature and Contribution of this Paper

There have been a number of studies providing estimates of retirement wealth for the U.S. for the population as a whole or by age group. Perhaps, the seminal study in this field on the effects of retirement wealth on wealth inequality is Feldstein (1976) who estimates on the basis of the 1962 Survey of Financial Characteristics of Consumers that the inclusion of Social Security wealth led to a sharp reduction in measured wealth inequality. The Gini coefficient for the sum of net worth and Social Security wealth among families in age class 35 to 64 was 0.51, compared to a Gini coefficient of 0.72 for net worth.

Wolff (1987) follows up by examining the distributional implications of both Social Security and private pension wealth. Using the 1969 Measurement of Economic and Social Performance (MESP) database, he shows that while SSW had a pronounced equalizing effect on the distribution of augmented wealth, DBW had by itself a much smaller equalizing effect. In particular, the addition of SSW to net worth reduced the overall Gini coefficient from 0.73 to 0.48 but the addition of DBW to the sum of net worth and SSW raised the Gini coefficient back to 0.66. The sum of SSW and DBW together had an equalizing effect on the distribution of augmented wealth but substantially less than SSW alone.

McGarry and Davenport (1997), using the 1992 wave of the Health and Retirement Study (HRS), finds that pension wealth was only slightly more equally distributed than net worth, though adding pension wealth to net worth had an equalizing effect (with the wealth share of the top decile

[1] The SCF survey was also conducted in 1983. However, the methodology is somewhat different than the later years and it is missing some key variables that are needed for this study, so that I do not use this data in this study.

declining from 53 to 45 percent with the addition of pension wealth). Kennickell and Sunden (1999), using the 1992 SCF, find a net equalizing effect from the inclusion of both private pension and Social Security wealth, reducing the share of total wealth held by the top one percent of non-elderly households from 31 to 16 percent.

A related topic is the make-up or composition of total (augmented) household wealth. Gustman *et. al.* (1997), for example, using the 1992 HRS, estimate that collectively pensions, Social Security, and health insurance accounted for about half of the wealth held by all households in age group 51 to 61. However, the proportion varied by wealth level. They find that these three components made up 60 percent of the wealth of wealth percentiles 45 to 55 but only 48 percent of wealth percentiles 90 to 95. They conclude that pension wealth and Social Security wealth (as well as health insurance) were more important for middle class households than the rich. In a follow-up study, Gustman and Steinmeier (1998) find that on average pensions accounted for one quarter of accumulated wealth, Social Security benefits another quarter, and traditional net worth the remainder.

The most recent papers on the subject include Devlin-Foltz et. al. (2016), Fang et. al. (2016), and Sabelhaus and Henriques Volz (2020). Devlin-Foltz et. al. (2016) use data from the SCF covering years 1989 through 2013. They report that the shift in the type of pension coverage from defined benefit (DB) to defined contribution (DC) occurred within, not just across, income groups. Moreover, since retirement wealth is less concentrated than nonretirement wealth, the growth of retirement wealth relative to nonretirement wealth helped offset the increasing concentration in nonretirement wealth. However, the shift from DB to DC had only a modest effect in the other direction because DC wealth is more concentrated than DB wealth. Fang et. al. (2016) conduct a methodological analysis of alternative ways of estimating pension wealth accumulations using the Health and Retirement Study. Sabelhaus and Henriques Volz (2020) use data from the SCF for 1995 through 2016 to estimate SSW. Their main finding is that that including SSW in a comprehensive wealth measure reduces estimated levels of wealth inequality but does not reverse the upward trend in top wealth shares.

In contrast, there have been only a small number of studies (as far as I can ascertain) that have provided estimates of DBW and SSW by race. Several use the SCF. These include Wolff (2011) for years 1983 to 2007; Veghte, Schreur, and Waid (2016) for 2013 only; Wolff (2022) for 1989 to 2016; and Hou and Sanzenbacher (2020) for years 1992 and 2016.

Wolff (2011) finds that the addition of DBW and SSW to the household portfolio reduced the measured wealth gap between minorities and whites. That is to say, the ratio of augmented wealth between the two groups was higher than the ratio of net worth. Moreover, the degree to which the addition of DBW and SSW to standard net worth lowered the wealth gap increased over years 1989 to 2007 (the analysis ended in 2007). The principal effect came from the addition of SSW. However, in this analysis, African-Americans and Hispanics were grouped into a single category. Here, separate estimates are presented for the two groups and the results updated to 2019.

The findings of Wolff (2022) are discussed above, though the effects of retirement wealth were not a principal focus of the study.[2] Hou and Sanzenbacher (2020) make use of the HRS for years 1992 and 2016. Among the principal findings are 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. These figures are quite comparable to my own for 2019. They also find that Black households had just 14 percent of the pension wealth of white households, and Hispanic households had just 20 percent in 2016. I find for 2019 higher ratios of 0.35 and 0.24 respectively.

However, as far as I can tell, none of these has analyzed the impact of the racial mortality differential on the retirement wealth gap and none has performed this analysis over the Covid-19 Pandemic.

3. Data sources and methods

The primary data sources used for this study are the 1983, 1989, 2001, 2007, 2010, and 2019 SCF conducted by the Federal Reserve Board. Each survey consists of a core representative sample combined with a high-income supplement. Starting in 1989, the high income supplement is selected as a list sample derived from tax data by the Statistics of Income Division of the Internal Revenue Service (SOI). This second sample is designed to disproportionately select families that were likely to be relatively wealthy. Typically, about two thirds of the cases come from the representative sample and one third from the high-income supplement.

The basic wealth concept used here is standard wealth (or net worth) NW, which is defined as the current value of all marketable or fungible assets less the current value of debts. Total assets are the sum of: (1) housing; (2) other real estate; (3) bank deposits, certificates of deposit, and money market accounts; (4) financial securities; (5) the cash surrender value of life insurance; (6) defined contribution pension plans, including IRAs and 401(k) plans; (7) corporate stock and

[2] The empirical analysis of Veghte, Schreur, and Waid (2016) is based on estimates provided by Edward Wolff and now contained in Wolff (2022).

mutual funds; (8) unincorporated businesses; and (9) trust funds. Total liabilities are the sum of: (1) mortgage debt, (2) consumer debt and (3) other debt.

This measure reflects wealth as a store of value and therefore a source of potential consumption. I believe that this is the concept that best reflects the level of well-being associated with a family's holdings. Thus, only assets that can be readily converted to cash (that is, "fungible" ones) are included. As a result, consumer durables such as automobiles are excluded here since these items are not easily marketed, with the possible exception of vehicles, or their resale value typically far understates the value of their consumption services to the household. Another justification for their exclusion is that this treatment is consistent with the national accounts, where purchase of vehicles is counted as expenditures, not savings. A further rationale is that cars are typically considered a necessity which are needed to enable consumption or earn income – for example, to purchase groceries or go to work.[3]

Also excluded in the concept of net worth is the value of future Social Security benefits the family may receive upon retirement ("Social Security wealth"), as well as the value of retirement benefits from private pension plans ("pension wealth"). Even though these funds are a source of future income, they are not in their direct control and cannot be marketed. The value of these two components will be included in a measure of augmented wealth (see the next section).

4. Methodology

The imputation of both defined benefit pension wealth (DBW) and Social Security wealth (SSW) involves a large number of steps, which is summarized below.[4] It should be noted that the standard definition of DBW and SSW is based on the conventional "on-going concern" treatment wherein it is assumed that employees continue to work at their place of employment until their expected date of retirement.

4.1 Pension wealth. For retirees (r), let PB be the pension benefit currently being received by the retiree. The SCF questionnaire indicates how many pension plans each spouse is involved in and what the expected (or current) pension benefit is. The SCF questionnaire also indicates whether the pension benefits remain fixed in nominal terms over time for a particular beneficiary or is indexed for inflation. In the case of the former, $DBWr_i$ for retiree i is given by:

[3] As a result, my wealth figures will differ somewhat from those provided by the Federal Reserve Board which include the value of vehicles (for example, Bricker et. al., 2016).

[4] See Wolff (2017), Appendix 3 for more details.

$$(1) \qquad DBW_{ri} = D_i \sum_{0}^{109-A} PB(1 - m_{a,g,r,ti}) / (1 + \delta)^t$$

where D_i has a value of 1 if person i is covered and 0 otherwise, and in the latter case,

$$(2) \qquad DBW_{ri} = D_i \sum_{0}^{109-A} PB(1 - m_{a,g,r,ti}) / (1 + \delta^*)^t$$

where A is the current age of the retiree; $m_{a,g,r,ti}$ is the projected mortality rate of person i at time t based on age(a), gender(g), and race(r); δ = is the nominal annual discount rate, set to 5 percent; δ^* = the real annual discount rate, set to 2 percent; and the summation runs from zero to the number of years when the retiree reaches an arbitrary age limit of 109. [5]

The SCF provides detailed information on pension coverage among current workers (w), including the type of plan, the expected benefit at retirement or the formula used to determine the benefit amount (for example, a fixed percentage of the average of the last five year's earnings), the expected retirement age when the benefits are effective, the likely retirement age of the worker, and vesting requirements. Information is provided not only for the current job (or jobs) of each spouse but for up to five past jobs as well. On the basis of this information and on projected future earnings, future expected pension benefits (EPB_w) are then projected to the year of retirement or the first year of pension eligibility. Then the present value of pension wealth for current workers (w) is given by:

$$(3) \qquad DBW_{wi} = D_i \cdot S_i \sum_{LR}^{109-A} EPB(1 - m_{a,g,r,ti}) / (1 + \delta)^t$$

where S_i is the probability of person i surviving from current age to age of retirement, RA is the expected age of retirement and LR = A - RA is the number of years remaining to retirement.

4.2 Social Security wealth. For current Social Security beneficiaries (r), let OASI be the OASI Social Security benefit currently being received by the retiree. Again, the SCF provides information for both husband and wife. Since Social Security benefits are indexed for inflation, SSW is given by

$$(4) \qquad SSW_{ri} = D_i \sum^{109-A} OASI\,(1 - m_{a,g,r,ti}) / (1 + \delta^*)^t$$

[5] Estimates of DBW as well as SSW are quite sensitive to the choice of inflation rate and discount rate. I choose a 3 percent inflation rate since it is very close to the actual average annual change of the CPI-U-RS index from 1989 to 2019. Moreover, I choose a 5 percent nominal discount rate because it likewise is close to the actual average annual rate of return on liquid assets over the same period. These two choices lead to a 2 percent *real* discount rate (the difference between the two rates). A higher real discount rate will lead to lower estimates of DBW (and likewise SSW), and, conversely.

0

where it is assumed that the current Social Security rules of that year remain in effect indefinitely.[6]

The imputation of SSW among current workers is based on the worker's actual and projected earnings history estimated by a standard human capital regression equation. First, coverage is assigned based on whether the individual expects to receive OASI benefits and on whether the individual is salaried or self-employed. Second, on the basis of the person's earnings history, the person's Average Indexed Monthly Earnings (AIME) is computed. Third, on the basis of the rules current at the time of the survey year, the Primary Insurance Amount (PIA) is derived from AIME. Then,

$$(5) \qquad SSW_{wi} = D_i \cdot S_i \sum_{LR}^{109\text{-}A} PIA\ (1 - m_{a,g,r,ti}) / (1 + \delta^*)^t$$

As with pension wealth, the summation runs from the number of years left to retirement, LR, to the number of years when the retiree reaches age 109.

Before 2006, the CDC mortality and life expectancy tabulations are available for only two racial categories: whites and Blacks. However, beginning in 2006, the tabulations are also available for three racial/ethnic categories: non-Hispanic whites, non-Hispanic blacks, and Hispanics. In the 2019 data, the only breakdown is for these three categories.[7] As a result, in the tables below, I show results using the two category breakdown for 1983, 1989, 2001, and 2007 (my so-called “old series”) and the three category breakdown for 2007, 2010, and 2019 (my so-called “new series”). For the common year 2007 I provide an analysis of how the results on DBW and SSW differ between the two categorizations.

As can be seen in Equations (1) – (5), the mortality rates $m_{a,g,r,ti}$ are separable from the other terms. Counterfactual mortality rates can be susbstituted for the actual mortality rates. Here I re-estimate DBW and SSW by sustituting 2020 mortality rates for 2019 mortality rates. This procedure is still based on the 2019 SCF data and provides wealth balance sheets and demographics for individuals included in the sample. I keep the age structure unchanged in order to isolate the effects

[6] Separate imputations are performed for husband and wife. According to current and past rules, a spouse – say, the wife – is entitled to the greater of her own SS benefit or 50 percent of her husband’s SS benefit. An adjustment in the Social Security benefit is also made for the surviving spouse. According to current and past rules, a surviving spouse -- is entitled to the greater of her own SS benefit or her deceased husband’s.

[7] Actually, in the 2019 CDC data, a fourth category is added for non-Hispanic Asian Americans. However, this category is available for only one year. As a result, I classify Asian Americans in the non-Hispanic white category in all years of analysis.

of mortality rate changes on DBW and SSW. For example, in the case of Social Security Wealth for retirees in 2019, equation (4) is modified as follows:

$$(4') \qquad SSW_{ri} = D_i \sum_{0}^{109-A} OASI\ (1 - m^{2020}{}_{a,g,r,ti}) / (1 + \delta^*)^t$$

where m^{2020} are 2020 mortality rates. The percentage difference in mean and median SSW between the new estimates from equation 4' and the original estimates from equation 4 will indicate how much the change in mortality rates affects SSW. Separate calculations are performed for non-Hispanic Black women, non-Hispanic Black men, Hispanic women, Hispanic men, non-Hispanic white women, and non-Hispanic white men and for equations (1) to (5). This procedure also enables us to determine how the change in mortality rates affects the racial wealth gap.[8]

In this application, I also estimate the effect of racial differences in mortality rates on DBW and SSW by substituting white (W) mortality rates for Black (B) mortality rates and re-estimating equations (1) to (5). Again, as an example, equation (4) is re-estimated for Black households as:

$$(4'') \qquad SSW_{Bi} = D_i \sum_{0}^{109-A} OASI\ (1 - m^{2019}{}_{a,g,W,ti}) / (1 + \delta^*)^t$$

5. Recent Trends in Life Expectancy and Survival Rates

It is helpful to begin the empirical analysis with an overview of overall life expectancy trends. As shown in Figure 1, according to CDC data, there is a big spread in life expectancies

[8] Of course, it would be better to have 2020 microdata for wealth holdings by households to go with the 2020 mortality rates, respectively, but these data are not yet available (the next release of the SCF is scheduled for 2022). It might be possible to update overall mean wealth using the data from the Financial Accounts. However, as far as I can tell, it is not possible to update net worth by race.

among the six groups shown.[9] In 2019, before the Pandemic, Hispanic women enjoyed the highest life expectancy at birth, 84.4 years, followed by non-Hispanic white females at 81.3 years, then Hispanic males at 79.1 years, non-Hispanic white males at 76.4 years, and lastly non-Hispanic black males at 71.6 years.[10] The overall spread between Hispanic females and black males was a considerable 12.8 years. Over time, at least between 2006 and 2019, life expectancy rose for all six groups, though not by a lot. The largest gain occurred for black males, at 2.1 years, and the smallest for white males and white females, at 0.7 years.

[Figure 1 about here]

The gap in life expectancies at birth between whites and the two minority groups fell between 2006 and 2019 (see Figure 2). The differential between black and white males declined from 6.2 to 4.8 years, that between black and white females from 4.2 to 3.1 years, that between

[9] The source for years 2006-2019 is: "National Vital Statistics Reports, Vol. 70, No. 19, March 22, 2022 1900–1928, and United States, 1929–2019": Table 19. Estimated life expectancy at birth, in years, by Hispanic origin and race and sex: Death-registration states, 1900–1928, and United States, 1929–2019, available at: https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-19.pdf. The series with a separate breakdown for Hispanics, non-Hispanic whites, and non-Hispanic females begins only in 2006. The source for 2020 is "National Vital Statistics Reports, U.S. State Life Tables, 2020" by Elizabeth Arias, Ph.D., Betzaida Tejada-Vera, M.S., Farida Ahmad, M.P.H., and Kenneth D. Kochanek, M.A., Vol. 71, No. 1, March 22, 2022, available at: https://www.cdc.gov/nchs/data/nvsr/nvsr71/nvsr71-01.pdf.

The sources for earlier years are as follows: 1989: National Center for Health Statistics, "Vital Statistics of the United States, 1989," Vol. II, Section 6, Life Tables, Washington: Public Health Service, December 1992, DHHS Publication No. [PHS] 93-1104, Page 12, Table 6-3, "Expectation of Life at Single Years of Age, by Race and Sex: United States, 1989," available at:
https://www.cdc.gov/nchs/data/lifetables/life89_2acc.pdf
2001: National Vital Statistics Reports, Volume 52, Number 14, "United States Life Tables, 2001," February 18, 2004, available at:
file:///C:/Users/ed/Downloads/US20Life20Tables20-20200120-20DHHS.pdf.
2007. National Vital Statistics Reports, "United States Life Tables, 2007", available at
https://ftp.cdc.gov/pub/health_Statistics/nchs/publications/NVSR/59_09/
2010: National Vital Statistics Report, Vol. 62, No. 7," United States Life Tables, 2010," November 6, 2014.
available at: http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_07.pdf
2019: National Vital Statistics Report, Vol. 70, No. 19," United States Life Tables, 2019," March 22, 2022, available at:
https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-19.pdf.

[10] Actually, the highest life expectancy in 2019 is recorded for Asian-American females, at 87.4 years, with Asian-American males in third place at 83.5 years. Figures on Asian-Americans are available only for 2019 and, as a result, are not shown in Figure 1.

Hispanic and white males from -1.8 to -2.7 years, and that between Hispanic and white females from -2.3 to -3.1 years.

[Figure 2 about here]

Then the Pandemic hit and according to final CDC figures there were some stunning declines in life expectancy that occurred over a single year, particularly among minorities. Perhaps, the most shocking developments are that life expectancy for Hispanic males plummeted by 4.5 years and that for Black males by 3.8 years. Losses were more modest among whites -- 1.6 years for white males and 1.2 years for white females – but a bit higher among minority females – 2.8 years for Black females and 3.1 years for Hispanic females. As a result, the gap in life expectancies between whites and the two minorities shot up in 2020, particularly for men. The differential between Black and white males went from 4.8 to 7.0 years and that between Hispanic and white males from -2.7 to 0.2 years. Indeed, Covid-19 more than wiped out the mortality advantage of Hispanic males. Moreover, the life expectancy gap between Black and white females rose from 3.1 to 4.7 years and that between Hispanic and white females from -3.1 to -1.2 years.

Another cut is provided by considering survival probabilities. I focus on the probability of an 18-year old to survive to age 65 since this is a critical age for obtaining Social Security benefits. For black males, it went from an already shockingly low 71.9 percent in 2019 to an even lower 65.3 percent in 2020, a 6.52 percentage point decline (see Figure 3). An even sharper reduction in survival probability is seen for Hispanic males, from 84.8 to 78.1 percent or by 6.71 percentage points. Black and Hispanic females saw smaller drops in survival probability of 3.73 and 2.86 percentage points, respectively. White males and females, on the other hand, experienced much smaller declines.

[Figure 3 about here]

6. Wealth trends in standard and augmented net worth

I begin with descriptive statistics for standard net worth. This will establish a baseline for the rest of the analysis. Table 1 documents robust wealth growth from 1983 to 2007.[11] Median wealth increased at an annual rate of 1.39 percent over 1983-1989, 1.51 percent over 1989-2001, and then 2.90 percent over 2001-2007. However, median wealth plunged by a staggering 43.9 percent over 2007-2010! The primary reasons were the collapse in the housing market and the high leverage of middle class families. It rebounded somewhat over 2010-2016, climbing by 17.1

[11] All dollar figures unless otherwise indicated are in 2019 prices deflated by the CPI-U-RS series.

percent, and again over 2016-2019, by 21.2 percent, though it was still down 20.4 percent from its 2007 peak.

[Table 1 about here]

Mean net worth also grew vigorously over 1983-1989, at an annual rate of 2.52 percent, about double that of median wealth, and then 3.24 percent over 1989-2007. Years 2007-2010 saw an absolute decline in mean wealth. The main causes were falling housing and stock prices. However, whereas median wealth plunged by 43.9 percent, mean wealth fell by (only) 16.1 percent. Mean wealth then grew by 27.9 percent over 2010-2016 and was 7.3 percent above its previous 2007 peak. This was followed by almost no change from 2016 to 2019.

The figures in Row 3 show that wealth inequality increased from 1983 to 1989 (by 0.029 Gini points) and then remained virtually unchanged from 1989 to 2007, at least according to the Gini coefficient. Years 2007 to 2010 saw a sharp elevation in wealth inequality, with the Gini coefficient rising by 0.032. From 2010 to 2016 there was a small rise in the Gini coefficient. Over 2016-2019, the Gini coefficient dropped from 0.877 to 0.869.

I next add in defined benefit pension wealth (DBW) and Social Security wealth (SSW) to the household portfolio to created augmented wealth. How does the inclusion of these two components affect wealth trends? As noted in Section 4, The SCF provides considerable detail on both pension plans and Social Security contributions. The SCF also gives detailed information on expected pension and Social Security benefits for both husband and wife. The imputation of both DBW and SSW involves a large number of steps which are summarized in Section 4 above. I use here the standard gross measure, since it is the conventional formulation. Moreover, the definition of DBW and SSW is based on the conventional "on-going concern" assumption where it is assumed that employees continue to work at their place of employment until their expected date of retirement.

I define "non-pension wealth" NWX be as marketable household wealth (NW) minus defined contribution wealth (DCW):

(6) $NWX = NW - DCW$.

Total pension wealth, PW, is given by:

(7) $PW = DCW + DBW$

Privately accumulated wealth PAW is then defined as:

(8) $PAW = NWX + PW$.

The term “privately accumulated wealth” is used to distinguish contributions to wealth from private savings and employment contracts with both private and government employers from those of social insurance provided by the state – notably, Social Security. Retirement wealth is defined as the sum of pension and Social Security wealth:

(9) RW = PW + SSW

and augmented household wealth, AW, by

(10) AW = NWX + PW + SSW.

6.1 Pension Wealth

I begin the empirical analysis by looking at the pension coverage rate both for all households and by age group in Table 2.[12] I consider three age groups in particular – under 47, 47-64, and 65. The reason is that time trends do differ among these different age classes. However, results for age group 47 to 64 are highlighted because there is complete data available for this group from 1983 to 2019 and this is the age group most affected by the transition of the pension system that I will discuss below. [13]

[Table 2 about here]

One of the most dramatic changes in the retirement income system has been the replacement of many traditional DB plans with DC pensions. The picture that unfolds is a precipitous drop in DB coverage among all households more than compensated by a sizeable increase in DC coverage, at least until 2007. Moreover, while mean pension wealth gained rapidly from 1989 to 2007, it grew more slowly from 2007 to 2019.

The share of households with DC pension accounts skyrocketed over the years 1989 to 2001, from 24.0 to 52.2 percent, or by 28.2 percentage points (see Appendix Table 1 for more details). The picture changed from 2001 to 2007 when there was virtually no change in the DC coverage rate and then, indeed, a small fall-off in the coverage rate from 2007 to 2019. Trends are different for DB pension wealth. The share with a DB pension plan fell by 11.2 percentage points between 1989 and 2001 from 45.6 to 34.4 percent. There was then a slight uptick from 2001 to 2007 followed by a 3.9

[12] Figures on DBW and SSW cannot be estimated for households under age 47 in 1983 and, correspondingly, for all households as well.

[13] I choose age 47 as a break point for two reasons. First, by age 47 most workers have accumulated somewhere between 20 and 25 years of labor market experience and are on a fairly stable earnings path, so that projections of future earnings become reasonably reliable. Second, for those with a DB plan, most are fully vested by then and are likely to be able to project their future retirement benefit with some accuracy.

percentage point decline from 2007 to 2019. The share of all households covered by either a DC or a DB plan increased from 56.0 to 65.6 percent between 1989 and 2001, when it peaked, and then fell off to 63.2 percent in 2019. Time patterns are similar by age group except for age group 47 to 64 (the "middle-aged") for whom the fall-off in both DC and DB pension coverage between 2007 and 2019 was even more pronounced than it was among all households.

As shown in Table 3, there were huge increases in the average holdings of DCW, with the average value among all households increasing by a factor of 14.4 between 1983 and 2001 (see Appendix Table 2 for more details). The rise in DCW slowed down from 2001 to 2007, with the mean increasing by 22.2 percent. The pace picked up a bit from 2007 to 2019. Opposite trends are again evident for DBW (DB pension wealth). The mean rose by only 6.2 percent between 1989 and 2001. The years 2001 to 2007 again saw a small rise, 5.5 percent, and years 207 to 2019 another modest increase of 8.o percent. Did the spread of DC type pension plans adequately compensate for the decline in traditional DB pension coverage? Average pension wealth PW climbed by 86.3 percent from 1989 to 2001.[14] The growth in PW slowed down markedly with mean PW up by 14.2 percent from 2001 to 2007 and then 23.3 percent from 2007 to 2019. Median PW among PW holders *only* did worse than mean PW from 1989 to 2001, rising 38.7 percent, better than mean PW from 2001 to 2007, gaining 18.8 percent, but a lot worse from 2007 to 2019. Results are similar by age group with enormous increases in mean DCW and mean PW from 1989 to 2007 and more modest gains after that.

[Table 3 about here]

The Pandemic hit in March of 2020 and, as we saw in Section 5, there were stunning declines in life expectancy, particularly among Black and Hispanic men. As a consequence, mean DBW among all households fell by 3.6 percent, mean PW was down by 1.4 percent, and median PW among those covered by PW plans declined by 0.9 percent. The effect of the Pandemic was strongest among older households for whom mean DBW dropped by 4.3 percent and median PW also by 2.4 percent.

6.2 Social Security and augmented wealth

I now turn to an appraisal of what happened to augmented wealth, AW. AW is the most comprehensive measure of the full set of resources available for retirement, and so its change over time is of considerable interest when considering trends in retirement adequacy. Moreover, an analysis of trends in AW will allow us to determine whether the basic findings with regard to net worth NW

[14] Median pension values are strongly affected by the share of households with pension wealth and, as a result, are not shown here for all households.

are changed when pension and Social Security wealth are included in the definition of household wealth. I find that whereas there was rapid growth in mean AW during the 1990s, a slowdown occurred over the 2001-2007 period, followed by an even greater slowdown from 2007 to 2019. Median AW showed slower growth over time than mean AW. However, like mean AW, growth slowed down between 1989-2001 and 2001-2007 but this was followed by an absolute decline over the 2007-2019 period.

I look first at trends in Social Security wealth (SSW). SSW averaged $248,500 in 2019 among all households (see Appendix Table 3). This compares to a mean NW of $723,800 and a mean PW of $213,000. Median SSW in 2019 was $211,500 – 85.1 percent of mean SSW (see Appendix Table 4). This suggests a normal or close to normal distribution of SSW. Moreover, median SSW was more than twice median NW.

Mean SSW among all households rose by 46.0 percent between 1989 and 2001 (see Table 4). This compares to an 86.3 percent gain in mean PW. The percentage increase in median SSW was very close to that of mean SSW – a reflection of relative constancy in SSW inequality over time. The rise in SSW over this period largely reflected increasing real wages, particularly in the late 1990s, and rising longevity. This was offset, in part, by the increase in the age at which full Social Security benefits take effect from age 65 to age 67 for persons born after 1938 and the rising share of minorities in the labor force, whose average earnings are lower than those of whites.

[Table 4 about here]

The years 2001 to 2007 witnessed almost no growth in mean and median SSW. This turnaround from earlier years was largely attributable to the wage stagnation of this decade as well as to the increasing age at which full Social Security benefits took effect. Another factor, as noted above, was the increasing share of minorities in the workforce. Additional factors are the higher unemployment rates of the 2000s compared to the 1990s and the drop in the median retirement age compared to the 1990s. Both of these led to fewer years of employed work life. Moreover, though longevity increased over this period, the rate of increase slowed down relative to the 1990s. From 2007 to 2019, mean SSW grew modestly, by 12.3 percent, and median SSW by 12.0 percent. Over years 1989 to 2019, the former gained 65.9 percent and the latter 55.0 percent.[15] Time trends are very

[15] It is of interest to compare results for 2007 between the “old series” and “new series.” As shown in Table 5, estimated mean SSW based on the three category mortality rates mortality (non-Hispanic whites, non-Hispanic Blacks, and Hispanics) is 8.5 percent greater than that based on the two category breakdown (whites and Blacks, where Hispanics are put in the same category as Blacks). It is first of note that changing over from the two-category

similar by age group, with the senior citizen group enjoying the fastest growth, followed by middle-aged households and then young households.

I now turn to an appraisal of what happened to augmented wealth, AW, the sum of net worth, pension wealth, and Social Security wealth. Mean net worth among all households rose by 48.8 percent between 1989 and 2001, while median net worth increased by 19.9 percent. Adding in DBW and SSW, we find that mean AW rose by 39.4 percent and median AW by 23.3 percent. The slower growth in mean AW than mean NW was due almost entirely to the very slow rate of increase of mean DBW over these years (6.2 percent).[16]

The years 2001 to 2007 look different. The growth in mean AW slowed down, registering a 14.4 percent gain among all households compared to a 39.4 percent increase in 1989-2001. This translates into an annual grow rate of 2.77 percent in the first period and 2.25 percent in the second. On the other hand, median AW advanced slightly faster in the second period, an annual rate of 1.80 percent in comparison to an annual rate of 1.75 percent in 1989-2001. However, once again mean AW gained less in percentage terms than mean NW. This is due to the very slow growth of both mean DBW and mean SSW over these years. Median AW likewise showed a slower rate of gain than median NW. In this case, this is due almost entirely to the slow advance (actually, negative growth) of median SSW.

Progress in mean AW once again slowed down from 2007 to 2019. However, here the main culprit was lower expansion in net worth. Median AW showed a small absolute decline over these years, which was due to a substantial drop in median NW. Mean AW progressed slightly faster than mean NW, due to gains in mean SSW, and median AW collapsed less than median NW, also because of gains in median SSW. By 2019 mean NW and mean AW had all exceeded their 2007 level. However, this was not the case for median NW and median AW, which were lower in 2019 than in 2007.

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breakdown to the three-category one has very little effect on the CDC mortality rates for the "white" group and "Black" group. The changeover lowers life expectancy at birth by 0.13 years for white males, 0.18 years for white females, 0.42 years for Black males, and 0.28 years for Black females. However, life expectancy at birth is notably higher for Hispanics than for Blacks (with whom they were originally classified) – 7.29 years for males and 6.11 years for females. Thus, adding Hispanics as a separate category has a large effect on estimated SSW since they have notably higher life expectancy than blacks and this raises average SSW. Adding Hispanics as a separate category has a smaller effect on estimated mean DBW, raising it by 2.8 percent (see Appendix Table 3). The reason for the smaller effect is that Hispanics held only a small proportion of total DBW in 2007 (only 4.0 percent)

[16] Mean PAW gained only 37.4 percent over this period.

Time trends were similar for age groups 47-64 and 65 and over. However, mean AW for the under 47 age group was essentially unchanged over the 2007-2019 period and was up by only 24.1 percent over the full 1989-2019 period, compared to a 75.3 percent expansion among all households. Likewise, median AW for this age group rose by only 13.6 percent over 1989-2019, compared to 32.4 percent overall. Moreover, both mean and median AW in 2019 were still at about the same level as in 2007.

What happened over the Pandemic? The most striking finding is that mean SSW among all households declined by 6.1 percent. Median SSW fell slightly more, 7.1 percent. The Pandemic effect was strongest among young households – 7.4 and 8.6 percent, respectively. All told, mean AW dipped 1.7 percent among all households and 3.2 percent among young ones. The effect was stronger on median values, with median AW declining 4.8 percent for the former and 7.9 percent for the latter.

6.3 Inequality in augmented wealth

What about inequality trends? It is helpful to begin by looking at those for pension wealth. As shown in Table 5, the inequality of pension wealth among all households remained basically flat from 1989 to 2019 (also see Appendix Table 5 for more details). However, this is a result of two offsetting trends. On the one hand, PW inequality among those covered by a pension plan rose over these years (the Gini coefficient went up from 0.641 to 0.683). This trend mainly reflected the changeover from relatively low inequality DB plans to higher inequality DC plans. On the other hand, pension coverage among all households rose over these years (from 56.0 to 63.3 percent), thus lowering overall PW inequality.

[Table 5 about here]

The pattern is very similar among young households. However, among age group 47-64, there was a surge in PW inequality from 2007 to 2019, with the Gini coefficient rising by 0.046 points. This result, like that for all pension holders, reflects the rising share of DCW in total PW, from 58.3 percent in 2007 to 67.6 percent in 2019, though in this case this effect was compounded by a fall in the share of households in this age group covered by a pension plan from 75.7 to 65.7 percent. The pattern is again different among seniors than the middle-aged. In this case there was a substantial reduction in the PW Gini coefficient from 1989 to 2001. In this case, while the share of DCW in PW rose from 2.7 percent in 1983 to 41.3 percent in 2001, this effect was dominated by the fact that the overall pension overage rate climbed from 51.8 to 62.6 percent.

The inequality of SSW among all households was, not surprisingly, much lower than that of net worth or pensions (see Appendix Table 5). In 2019, the Gini coefficient for SSW among all households was 0.352, compared to 0.869 for NW and 0.799 for PW. The Gini coefficient for SSW actually dropped a bit over these years, reflecting the rising share of households covered by Social Security, particularly between 1989 and 2001. For young households, the inequality of SSW showed a more or less steady rise over years 1989 to 2019. This trend may reflect widening dispersion in the underlying wage distribution among young workers, as well as widening differentials in unemployment spells and Social Security coverage. Among middle-aged ones, in contrast, SSW inequality remained more or less flat. Among seniors, there was a substantial drop in the inequality of SSW over 1989-2019, reflecting primarily increased Social Security coverage over these years.

What happened to the inequality of AW? It is first useful to look at the relative levels of inequality of its components. In 2019, SSW was the most equal component, with a Gini coefficient of 0.352 among all households. PW registered a value of 0.799 and NW a value of 0.869. Adding DBW and SSW to obtain AW lowered the Gini coefficient to 0.699. Thus, DBW and SSW had an equalizing effect on household wealth. This result reflects the fact that DBW and SSW are distributed much more equally than net worth.[17] Results are very similar for the three individual age groups.

As we saw in Table 1, the inequality of net worth NW among all households showed little trend from 1989 to 2007 followed by a spike from 2007 to 2019 (0.035 Gini points). How does the addition of pension wealth and Social Security wealth affect trends in wealth inequality? Generally speaking, there was little effect. From 1989 to 2007, the Gini coefficient for NW was up by 0.006 while that for AW rose by 0.021. However, from 2007 to 2019, the former increased by 0.035 and the latter by 0.025. Over the full 1989-2019 period, the former grew by 0.041 and the latter slightly more, by 0.046.

For young households, in contrast, AW inequality was up a lot less than NW inequality – 0.014 versus 0.064 Gini points over 1989-2019. The differential was especially large over years

[17] The main equalizing effect of retirement wealth comes from Social Security, not private pensions. In particular, adding DBW to NW lowered the Gini coefficient by 0.030 while adding SSW to PAW (the sum of NW and DBW) reduced the Gini by 0.140.

2007 to 2019 (0.051 Gini points). Among middle-aged households AW inequality rose a bit more than NW inequality, whereas among the elderly, the opposite was the case.

Why did the inequality of AW go up while that of NW remained was almost unchanged from 1989 to 2007? The main reason is that the inequality of RW increased. This was the case for all households, young households, and middle-aged ones (though not for older households). A secondary reason was an increase in the correlation coefficient between non-pension wealth NWX and RW, which advanced from 0.175 to 0.252 among all households and from 0.161 to 0.216 among middle-aged ones.[18] Conversely, why did the inequality of AW rise less than that of NW from 2007 to 2019? The primary explanation is that the share of RW in AW went up over these years while that of NWX correspondingly declined (see Table 6). Since RW inequality is much lower than NWX inequality, this shift lowered overall AW inequality. This shift occurred for all households and all three age groups. An additional factor is that the correlation coefficient between NWX and RW declined from 0.252 in 2007 to 0.210 in 2019 among all households, though it did increase from 0.216 to 0.257 among age group 47 to 64.

How did the Pandemic affect inequality? The key effects emanate from the fact that both low-inequality SSW and DBW fell in relative terms as a share of AW. First, there was a small increase in the inequality of PW of 0.002 Gini points among all households reflecting the modest shift in the composition of PW away from relatively lower inequality DBW toward higher inequality DCW. The effect was a little stronger among elderly households, 0.003 Gini points, as a result of a relatively larger drop in DBW as a share of PW. Second, the inequality of SSW itself showed an increase of 0.008 among all households. The reason is that the pattern of mortality rates associated with the Pandemic adversely affected low and moderate income families (particularly, Black and Hispanic ones, as we will see in Section 7) more than richer ones (particularly, whites). Third, altogether the Gini coefficient for AW by 0.010 among all households, as higher inequality NWX rose relative to lower inequality PW and SSW. The effect was particularly pronounced among younger households among whom the Gini coefficient was up by 0.018 points. This was due to an even greater shift in the composition of AW toward NWX and away from PW and SSW.

6.4. Composition of augmented wealth

[18] Among older households, the primary reason for the rise in AW inequality was the increasing share of net worth in AW, which rose from 68.4 percent in 1989 to 75.6 percent in 2007 (based on the Old series). Since the *level* of inequality of net worth is greater than that of retirement wealth, this shift resulted in higher inequality of AW in the later year. A secondary reason was the increase in the correlation between NWX and RW.

The last part of this section investigates trends in the composition of augmented wealth, AW. The effect of PW and SSW on mean and median wealth and the inequality of wealth will reflect, in part, the relative importance of these two components in AW. Among all households, there was an almost continuous decline in the share of non-pension wealth (NWX) in augmented wealth, from 62.6 percent in 1989 to 56.3 percent in 2019.[19] Correspondingly, the share of retirement wealth RW (the sum of PW and SSW) in AW rose from 37.4 to 43.7 percent. The large upsurge in RW came from DCW, which mushroomed from 2.2 percent of AW in 1989 to 12.2 percent in 2019. DBW, in contrast, fell from 11.8 to 6.9 percent, while SSW remained more or less constant as a proportion of AW – around 23 to 24 percent.

Time trends in the different components of AW are very similar by age group but their relative importance differed. Among young households, SSW amounted to a higher share of AW – between 32 and 41 percent – and DBW a smaller share. Middle-aged households saw a steeper rise in the share of DCW in AW – from 2.9 to 13.7 percent – and a sharper fall-off in DBW – from 14.0 to 6.6 percent. SSW formed a slightly lower proportion of AW -- around a fifth. Older households also saw a relatively sharp drop in the share of NWX in AW. DCW showed a very sharp rise, from 0.3 to 11.5 because entering cohorts had greater DC wealth than older ones. Interestingly, the proportion of DBW in AW was about the same in 2019 as in 1989 (11 or 12 percent). The share of SSW was about the same in 2019 as in 1989.

Then over the Pandemic these patterns reversed. Among all households, SSW dropped by 1.1 percentage points as a share of AW while NWX spiked was up by 1.0 percentage points. DBW, in addition, was down by 0.1 percentage points while DCW was up by 0.2 percentage points. This transformation was more pronounced among younger households among whom the share of SSW in AW declined by 1.8 points and that of NWX gained 1.4 points.

7. The Racial and Ethnic Wealth Gap

<u>7.1 Income and net worth trends.</u>

I now turn to the main focus of this study. I begin with standard measures of household wealth as well as income. Striking differences are found in the wealth holdings of different racial and ethnic groups. In Table 7, households are divided into three groups: (i) non-Hispanic whites,

[19] The upward blip in 2007 reflects the housing bubble that ended in 2006.

(ii) non-Hispanic African-Americans, and (iii) Hispanics.[20] In 2019, while the ratio of mean income between non-Hispanic white ("white") and non-Hispanic black ("black") households was an already low 0.47 and the ratio of median incomes was 0.58, the ratios of mean and median wealth were notably lower, at 0.14 and 0.06, respectively (also see Figure 4). The homeownership rate for black households was 44.0 percent, about three fifths the rate among whites.

[Table 9 and Figure 4 about here]

The racial ratio of mean income dropped from 1983 to 1989 and then remained more or less stable after that, while that of median income also dipped from 1983 to 1989 but then returned to its 1983 level by 2019. In contrast, the net worth ratio was the same in 2007 as in 1983, 0.19, but then fell to 0.014 in 2010 and remained there through 2019. The ratio of median wealth was much lower than that of mean wealth. In the case of median wealth, the black-white ratio picked up a bit from 7 percent in 1983 to 10 percent in 2001 but then retreated to 6 percent in 2019. The homeownership rate of black households grew from 44.3 percent in 1983 to a peak value of 48.6 percent in 2007 but then fell back to 44.0 percent in 2019. , while the black-white ratio was exactly the same in the two years, 0.65.

The picture is somewhat different for Hispanics. The ratio of mean income between Hispanics and (non-Hispanic) whites was 0.51 in 2019, higher than that between blacks and whites. The ratio of median income was 0.64, also higher than the ratio between black and white households. The ratio of mean net worth was 0.19 and that of median wealth was 0.09, both higher than the racial disparity. The Hispanic homeownership rate was 47.3 percent, likewise higher than that of Black households.

The ratio of both mean and median income dipped between 1983 and 1989 and then partially recovered by 2019. In contrast, the ratio of mean net worth between Hispanic and white households climbed from 0.16 in 1983 to a peak of 0.26 percent in 2007, dropped to 0.15 in 2010, but then rebounded to 0.19 in 2019, while the ratio of wealth remained close to zero throughout except for 2019, where it bounced up to 0.09. Moreover, the homeownership rate among Hispanic households surged from 32.6 to 49.2 percent between 1983 and 2007 but then dropped a bit to 47.3 percent in 2019.

7.2 Adding retirement wealth to the household portfolio

[20] The residual group, American Indians and Asians, is excluded here because of its small sample size in the earlier years.

I first consider how pension coverage evolved over time. As shown in 8, the share of white households with a DC pension account more than doubled over years 1989 to 2007 and then fell slightly over 2007-2019. In contrast, the DB coverage dropped between 1989 and 2007 and then declined again over 2007-2019. However, the proportion of whites covered by either a DC or a DB plan increased by 9.0 percentage points from 1989 to 2001 and then remained steady through 2019.

[Table 8 about here]

It is at once evident that whites were much more likely to have a pension plan than minorities. In 2019, 69.6 percent of white households held some form of pension wealth, compared to 49.3 percent of Black and 38.7 percent of Hispanic households. The gap in DC coverage was 21.8 percentage points between whites and Blacks and 27.6 percentage points between whites and Hispanics, but those in DB coverage were smaller. The disparity in DC coverage widened considerably over time, as the take-up rate was far greater among white workers than minorities. In contrast, the racial and ethnic gap in DB coverage fell quite substantially over these years, as participation plummeted among all groups. As a result, the racial and ethnic gap in overall PW coverage was about the same in 2019 as in 1989, though considerably larger between whites and Hispanics than between whites and Blacks.

Mean DCW among white households surged by a factor of 7.6 between 1989 and 2007 (see Table 9). Mean DBW, on the other hand, increased by only 11.9 percent. Overall, average PW more than doubled. DCW continued to expand and by 2019 was 40.8 percent above its 2007 level. Mean DBW in 2019 was also above its 2007 level, as was overall mean PW. Over the 1989 to 2019 period, mean PW among white households almost doubled, advancing more in percentage terms than mean net worth, spurred largely by the growth in DCW, while mean SSW gained 69.0 percent, about two fifths percent as fast as mean PW.

[Table 9 about here]

From 1989 to 2019, mean PW rose for all three groups but more so in percentage terms for whites than minorities. Mean SSW was also up for all three groups but in this case more so in relative terms for the two minorities. It is also of note that for Blacks and particularly Hispanics mean SSW was substantially greater than mean PW in 2019 whereas the two were about equal for white households. However, minority households also had a lot less accumulated in their pension plans than white households. In 2019 the mean PW of Black households was only 35.2 percent that of whites. The biggest gap was in DCW – a 22.5 percent ratio. The ratio in DBW was 55.9 percent.

Hispanics fared much worse in terms of PW, with a ratio of 0.240. The ratio in DCW was 0.209, about the same as the racial ratio, while the ratio in DBW was much lower, at 0.289.

The racial and ethnic gap in PW expanded over years 1989 to 2019, with the PW ratio between Blacks and whites falling from 0.455 to 0.352 and that between Hispanics and whites from 0.287 to 0.240. Minorities did quite a bit better in terms of SSW. The ratio of mean SSW between Blacks and whites advanced strongly from 0.437 to 0.599 and that between Hispanics and whites from 0.475 to 0.759.

The Pandemic hit Blacks and Hispanics much harder than whites both in terms of mortality rates, as we saw in Section 5 above, but also in terms of retirement wealth. As discussed in Section 7.4 above, there was a slight reduction in mean DBW and a more sizeable drop in mean SSW overall. The pattern is very similar for white households. Mean SSW dropped by 4.7 percent and mean DBW by 2.7 percent.

Black households saw a greater fall-off in their retirement wealth, with mean SSW down by 11.5 percent and mean DBW by 8.2 percent. Hispanics also got hit very hard, with mean SSW down by 13.1 percent and mean DBW by 9.6 percent. These results are due to the sharper increase in mortality rates among Blacks and Hispanics than among whites.

The Pandemic also enlarged the racial and ethnic gaps in retirement wealth. The Black-white ratio of mean DBW dropped from 0.559 before the Pandemic to 0.527 after it, and that of mean SSW from 0.599 to 0.556. The ratio of mean DBW between Hispanics and whites slumped from 0.289 to 0.269. The ratio of mean SSW showed a sharper fall-off, declining from 0.759 to 0.692.

7.3 Augmented Wealth

This section next moves on to a consideration of augmented wealth. As shown in Table 10, mean NW among white households more than doubled from 1989 to 2019, while mean AW rose by 90.8 percent. This increase was somewhat lower than that of net worth because of smaller percentage gains in SSW. The advance in median values was notably weaker. Median NW showed only a 23.1 percent rise. However, because median SSW advanced at a healthy clip relative to median NW, median AW showed a relatively stronger gain of 36.3 percent.

[Table 10 about here]

Mean and median AW also generally showed robust gains for Black and Hispanic households. Among white households mean NW outpaced mean AW, while median AW grew faster than median NW. However, the opposite was the case for Black households. For them, mean AW grew faster than mean NW, 84.9 percent versus 69.0 percent from 1989 to 2019. The advance in median values was actually stronger, with median NW rising 168.8 percent and median AW up 109.0 percent. The pattern for Hispanic households is rather different. Among them, mean NW outpaced mean AW – 135.9 percent versus 114.4 percent from 1989 to 2019. The same was true for median values, with median NW up by a huge 411.5 percent (from an admittedly low base) and median AW by 100.6 percent.

The racial and ethnic gaps in AW were much smaller than those in NW. The ratio of mean AW between blacks and whites in 2019 was 0.266, compared to a net worth ratio of 0.137. The ratio of median AW between the two groups was even higher at 0.375, compared to a ratio of only 0.056 in median net worth. The smaller gap in AW than NW is attributable mainly to the equalizing effect of SSW as we shall see below.

The ratio in mean AW between Blacks and whites fluctuated over time but by 2019 it was almost exactly the same as in 1989. In contrast, the ratio in mean NW was down in 2019 compared to 1989, from 0.168 to 0.137. The ratio of median AW was considerably up over these years, from 0.244 to 0.388, while the ratio of median NW ratio rose from a meager 0.026 to 0.056. Results are similar for Hispanics as for Blacks. The ratio of mean AW between Hispanics and whites was 0.315 while that in NW was 0.187, and the ratio of median AW was again much higher at 0.484 (and greater than the Black-white ratio), while that in NW was only 0.087. The ratio of both mean and median AW between Hispanics and whites advanced from 1989 to 2019, from 0.247 to 0.315 for the former and from 0.254 to 0.484 for the latter. The gap in both mean and median NW likewise lessened between the two groups over time.

Both defined benefit wealth and especially Social Security wealth play a role in lessening the racial divergence in augmented wealth relative to net worth. Adding DBW to NW had a relatively large effect on the overall Black-white ratio in 2019, increasing the ratio by 0.041. However, the larger effect derives from the inclusion of SSW, which enlarged the ratio by an additional 0.088. The effect of adding DBW on the ratio declined slightly over time, from 1989 to 2019, while the effect of adding SSW increased notably over time, from 0.049 to 0.088. The impact of adding DBW and SSW is even greater on the ratio of median AW. In this case, the addition of DBW and SSW augmented the ratio by 0.332 in 2019, and here again this effect rose over time, from 0.218 in 1989.

The results are a little different for the decomposition of the ratio of AW between Hispanics and whites. In this case, the addition of DBW had virtually no effect on closing the wealth gap between the two groups. Almost the total effect on raising the ratio of mean AW relative to mean NW comes from the addition of SSW, which raised the ratio by 0.118 in 2019 and, particularly, on the ratio of median AW, which enlarged the ratio by 0.397 in 2019. In these two cases, the evidence indicates that the effects increased over time from 1989 to 2019, from 0.06 to 0.118 for the ratio of mean AW and from 0.233 to 0.397 for the ratio of median AW.

What happened to augmented wealth over the Pandemic? As we just saw, mean DBW and SSW fell more in relative terms among minorities than among whites. Among white households, mean AW fell by only 1.2 percent and median AW by 2.6 percent. Black households witnessed an even steeper decline, with mean AW down by 6.7 percent and median AW by 9.3 percent. The story is similar for Hispanics, with mean AW dropping by 7.3 percent and median AW by a sizeable 12.1 percent. The effects are notably stronger among minorities than among whites for two reasons. First, the percentage decline in retirement wealth was greater for minorities than whites. Second, retirement wealth made up a much larger share of AW among the former than the latter.

The Pandemic also widened the racial and ethnic gaps in AW as it did in retirement wealth. The Black-white ratio of mean AW dropped from 0.266 before the Pandemic to 0.251 after it and the ratio of median AW from 0.388 to 0.362. The ratio of mean AW between Hispanics and whites slumped from 0.315 to 0.296, while ratio of median AW showed a steeper fall-off, declining from 0.484 to 0.437.

7.4 Decomposition Analysis

How much do differentials in mortality rates between white and Black Americans explain the racial gap in DBW and SSW? To answer this question, this final piece of analysis in the paper is conducted by substituting white (W) mortality rates $m_{a,g,W}$ for black(B) mortality rates $m_{a,g,B}$ and then re-computing DBW and SSW in equations (1) through (5). The percentage difference between the two estimates will measure the mortality gap effect on retirement wealth. The residual reflects difference in earnings history (earnings in the case of DBW depending on the formula used) and coverage rates.

Results are shown in Table 11 for 2019. The substitution of white mortality rates for Black mortality rates not surprisingly boosts DBW and SSW for Black households. As shown in Panel I, mean DBW is raised by 11.3 percent among all Black households, mean SSW by 12.5 percent, mean RW, which includes DCW which is unaffected by the substitution, by 10.5 percent, and mean AW by 7.7 percent. The effect is strongest among the youngest age group, for whom mean DBW is elevated by 19.1 percent and mean SSW by 16.8 percent. Among middle-aged Black households, the figures are respectively 14.6 and 13.0 percent, and among the aged, 6.0 and 6.6 percent. There are two reasons for the greater effect among the youngest group of households. First, the racial gap in mortality rates is larger among younger households than older ones. Second, there are more remaining years to compute the present value of each component (see equations 1-5), so that the compounding effect is greater for younger households.

[Table 11 about here]

Panel II analyzes the effect of this counterfactual substitution on the racial wealth gap. The substitution raises the Black/white ratio of DBW by 0.063 from 0.559 to 0.622 among all households and that of SSW by 0.075 from 0.599 to 0.674. The effect on RW is smaller, a 0.050 increase in the ratio, and that on AW still smaller, a 0.021 increase. Once again, the impact is greatest for the youngest age group, second highest for the middle-aged group, and lowest for the elderly.

The percentage of the wealth gap due to mortality rate differentials is calculated as the the ratio of the difference between the counterfactual ratio and the actual ratio divided by the counterfactual ratio. By this reckoning, 10.2 percent of the racial gap in mean DBW among all households is due to mortality rate differentials and 11.1 percent of the gap in mean SSW. The effects are again smaller for RW (9.5 percent) and AW (7.2 percent). Moreover, the results are again strongest for the youngest group (16.0 percent for DBW and 14.4 percent for SSW), second strongest for the middle group (12.7 and 11.5 percent, respectively), and lowest for seniors (5.6 and 6.2 percent, respectively).

Panels III and IV show results for median values.[21] The substitution enlarges median SSW among all Black households by 12.7 percent (about the same as mean SSW), median RW by 11.9 percent, and median AW by 10.5 percent. The effect is now much more pronounced among the under 47 age group – 17.5 percent expansion for median SSW, 15.8 percent for median RW, and a quite sizeable 21.3 percent for median AW. The enlargements are about average for the middle-aged group, and smaller for senior citizens.

How does the substitution of white for Black mortality rates affect the racial median wealth gaps? The effects are stronger for median values than mean values It raises the Black/white ratio of

[21] Median DBW is zero in almost all cases, so results are not shown for this component.

median SSW by 0.118 among all households from 0.560 to 0.677 (compared to 0.075 for mean SSW); that of RW by 0.100 (compared to 0.050 for mean RW), and that of median AW by 0.041 (compared to 0.021 for mean AW). Here too the effect is largest among the young, second highest for the middle-aged group, and lowest for the elderly. Indeed, for the under age 47 group, the substitution raises the ratio of median SSW by a remarkable 0.181.

With regard to the share of the wealth gap attributable to mortality rate differentials, the results are again much stronger for median values than mean values. Fully 17.4 percent of the racial gap in median SSW among all households is due to mortality rate differentials, 16.7 percent for median RW, and 9.5 percent for median AW. Among the youngest age group, the effects are even stronger – 25.2 percent for median SSW, 23.1 percent for median RW, and 17.6 percent for median AW. Again, results are second strongest for the middle group though still notable (18.7 percent for median SSW and 15.9 percent for median RW), and lowest for seniors.

10. Summary, Concluding Remarks, and Policy Implications

The story that unfolds is that the ratio of standard net worth between Black and white households rose a bit from 1989 to 2007, from of 0.17 to 0.19, and then collapsed to 0.14 by 2019. In somewhat similar fashion, the net worth ratio between Hispanics and whites shot up from 0.16 in 1989 to 0.26 in 2007 but then retracted to 0.19 in 2019. Indeed, in real dollar terms, the mean wealth of Black households was much the same in 2019 as in 2007, though Hispanic mean wealth was a little ahead.

Because the relative private wealth of Black families has not recovered as of 2019 and that of Hispanic families is still below its 2007 peak, the present value of their future potential claims on government, through Social Security, has become even more important than it previously was. The fact that the gap in augmented wealth between minorities and whites is much smaller than that in net worth depends overwhelmingly on Social Security wealth – that is, on public sector transfers – and is thus fundamentally different in origin (and exposed to political risk in much different ways) than net worth.

Indeed, when the definition of wealth is expanded to include Social Security wealth (and defined benefit pension wealth), the racial and ethnic wealth gap is markedly reduced. In 2019, the ratio between Blacks and whites was almost doubled and that between Hispanics and whites amplified by more than half. The ratio of median wealth was boosted from 0.06 to 0.39 for the former and from 0.09 to a massive 0.48 for the latter.

With regard to time trends, it is first the case that minorities lost ground relative to whites in terms of pension wealth, with the ratio of PW between Blacks and whites falling from 0.45 in 1989 to 0.35 in 2019 and that between Hispanics and whites from 0.29 to 0.24. However, minorities did quite a bit better in terms of SSW. The ratio of mean SSW between Blacks and whites climbed from 0.44 to 0.60 and that between Hispanics and whites from 0.48 to 0.76. Overall, the ratio of mean AW between Blacks and whites was 0.27, almost exactly the same in 2019 as in 1989. In contrast, the ratio of median AW between Blacks and whites progressed from 0.24 to 0.39. The ratio of mean AW between Hispanics and whites showed a notable gain from 0.25 to 0.32, while that of median AW showed an even more impressive advance from 0.25 to 0.48.

The Pandemic hit Blacks and Hispanics much harder than whites both in terms of mortality rates and retirement wealth. While mean SSW fell by 6.1 percent overall and by 4.7 percent among white households, it plummeted by 11.5 percent among Black households and 13.1 percent among Hispanics. Likewise, while mean DBW declined by 3.6 percent overall and by only 2.7 percent among whites, it dropped by 8.2 percent among Blacks and 9.6 percent among Hispanics. All told, whereas mean AW was down by only 1.7 percent overall and by 1.2 percent among whites, the reduction was more acute among Blacks and Hispanics of 6.7 and 7.3 percent, respectively. Median AW fell a bit more among all groups -- 2.6 percent for whites, 9.3 percent for Blacks and 12.1 percent for Hispanics.

The Pandemic also enlarged the racial and ethnic gaps in retirement and augmented wealth. The Black-white ratio of mean DBW dropped from 0.56 before the Pandemic to 0.53 after it. The ratio of mean DBW between Hispanics and whites sank from 0.29 to 0.27. The ratio of mean SSW showed a more acute decline, from 0.60 to 0.56 between Blacks and whites and from 0.76 to 0.69 between Hispanics and whites. Overall, the Black-white ratio of mean AW dropped from 0.27 before the Pandemic to 0.25 after it and the ratio of median AW from 0.39 to 0.36. The ratio of mean AW between Hispanics and whites went down from 0.32 to 0.30 and that median AW showed a steeper drop, from 0.48 to 0.44.

A counterfactual experiment is also run for year 2019 in which white mortality rates are substituted for Black mortality rates and Social Security wealth recalculated. The substitution had a positive effect on mean SSW calculated for all Black households, raising it by 12.5 percent. The impact was strongest among young households (under age 47), 16.8 percent. It is calculated that

11.1 percent of the racial gap in mean SSW among all households was due to mortality rate differentials. The results are again strongest for the youngest group, 14.4 percent.

The impact was stronger on median values and, in some cases, quite sizeable. The substitution enlarges median SSW among all Black households by 12.7 percent (about the same as mean SSW) but a sizeable 17.5 percent for the youngest age group. It raises the Black/white ratio of median SSW by 0.12 among all households from 0.56 to 0.68 (compared to 0.07 increase for mean SSW). Moreover, 17.4 percent of the racial gap in median SSW among all households is due to mortality rate differentials and 25.2 percent for the youngest group. However, still the biggest explanatory factor is the residual which mainly reflects difference in earnings history.

On the policy front, the results of this study highlight the importance of Social Security in the minority community. Social Security wealth constitutes a much higher proportion of total (augmented) wealth for minorities than whites. As a result, efforts to curtail Social Security payouts will have a much more deleterious effect on the finances of the two minority groups than those of whites. Such proposals are of two main forms. The first is to raise the "normal" retirement age at which full Social Security benefits are received. The normal retirement age has already been raised from 65 to a scheduled 67. Raising the normal retirement age is tantamount to a cut in lifetime Social Security benefits since the number of years for which benefits are received is effectively reduced. The second is to reduce the actual dollar amount of benefits collected at a given age of retirement. This can take the form of a downward adjustment in the formula used to convert AIME into PIA. It can also involve cutting back on the annual cost of living adjustment (using a different inflation index than the CPI-U, for example). Other proposals have also been made. In either case, the cutback will differentially adversely affect the minority community and raise the augmented wealth gap between them and whites.

Interestingly, other proposals might adversely affect white beneficiaries. First, raising the earnings cap on social Security contributions (without adjusting the benefit structure) will raise the relative cost for whites since, on average, their earnings are higher than those of Blacks or Hispanics. Second, means-testing Social Security benefits would likewise be more detrimental for white retirees than minority ones since their income is, on average, higher. Third, currently there are no income taxes assessed on Social Security benefits if adjusted gross income is less than $25,000 for singles and $32,000 for couples. Lowering these limits would likely impact white seniors more than minority ones and lower after-tax Social Security income more for the former.

As shown above, there is a huge racial and ethnic cleavage in coverage rates for 401(k) plans, IRAs, and other defined contribution plans , particularly among older households. In 2019, while 56.6 percent of white households had one of these plans, only 34.8 percent of Black households and an even lower 29.0 percent of Hispanic households held this form of wealth. Behaviorists propose a nudge in the form of making joining up the default option in employment contracts. However, it is more likely that the low level of participation among minorities is due to two other factors. First, minorities have lower income so that many cannot afford to participate in such a plan. Second, it is also likely that firms that employ minorities are less likely to offer such a plan in the first place. One policy option to consider is to legally require firms above a certain size (say, 100 employees) to provide such plans and make employer contributions mandatory, as opposed to contingent on employee contributions.

Though the racial and ethnic gap in Social Security wealth has closed over the years, it was still quite large in 2019. Perhaps, the most direct way to address this issue is to alter the basic formula for converting AIME into PIA. There are three possibilities. The first is to tweak the overall formula to make it more redistributive. While it is true that the current formula is redistributive, giving a higher replacement rate to lower earning workers, there is no reason why it cannot be made even more redistributive. This adjustment will, of course, benefit not just minority workers but all low income workers.

Second, with regard to the racial gap in SSW in particular, one could employ a mortality rate adjustment by race in recalibrating the Social Security benefit. This could take the form of a higher replacement rate in the basic formula for Blacks to reflect the fact that Blacks have lower life expectancies than whites. In fact, the Social Security Administration could use a procedure similar to the one I employ in my "counterfactual analysis" by substituting white mortality rates for Black mortality rates and adjust Social Security for Black workers accordingly. However, as noted above, this would close the racial gap in social Security wealth by only about 11.1 percent on average. Moreover, this procedure would not benefit Hispanic Americans and might even adversely affect them in terms of Social Security wealth since Hispanics have longer life expectancies than non-Hispanic whites.

Third, one could add a "discrimination adjustment" in calculating lifetime earnings as a basis for computing AIME. It is well known from the labor economics literature that Black and Hispanic workers receive lower wages even after controlling for numerous other factors such as education, age, union status, geographic location, industry, occupation, and the like. It is quite feasible to estimate such "discrimination coefficients." These could then be used to adjust the stream of lifetime earnings that is used to compute AIME for each individual worker. This procedure would benefit both Black and Latino workers. These three methods would help to lower the racial and ethnic differential in Social Security wealth.

What are the implications of the Pandemic for the Social Security trust fund? Can the Pandemic be a "silver lining"? Because of increased mortality rates, future Social Security payouts will be lowered. What about future contributions to the Social Security system? This will also be reduced. Which will fall more? This depends on differential mortality rates by age group. It has now been well established that mortality rates from Covid-19 are much higher for the elderly than younger people. As a result, persons receiving Social Security benefits (or who are soon to receive the benefits) will experience higher mortality rates than those persons contributing into the Social Security system. It is therefore likely that the net effect is a greater reduction in Social Security payouts than in Social Security contributions. (In the extreme case, imagine that all workers continue to contribute into the system and then die when they reach retirement age.) As a result, it is likely that the Pandemic will improve the reserves of the Social Security trust fund (Dushi et. al., 2022, reach a similar conclusion).

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Table 1: Basic Trends in Net Worth (NW), 1983-2019
(In thousands, 2019 dollars)

Variable	1983	1989	2001	2007	2010	2016	2019
1. Median	81.7	88.8	106.4	126.7	71.0	83.2	100.8
2. Mean	318.0	369.9	550.3	662.6	556.2	711.3	723.8
3. Gini coefficient	0.799	0.828	0.826	0.834	0.866	0.877	0.869

Percentage or Actual Change[a]

	1983-1989	1989-2001	2001-2007	2007-2010	2010-2016	2016-2019	1983-2019
1. Median	8.7	19.9	19.0	-43.9	17.1	21.2	23.4
2. Mean	16.3	48.8	20.4	-16.1	27.9	1.8	127.6
3. Gini coefficient	0.029	-0.001	0.008	0.032	0.011	-0.008	0.070

Annual Growth Rate (percentage)

	1983-1989	1989-2001	2001-2007	2007-2010	2010-2016	2016-2019	1983-2019
1. Median	1.39	1.51	2.90	-19.28	2.63	6.40	0.58
2. Mean	2.52	3.31	3.10	-5.84	4.10	0.58	2.28

Source: author's computations from the 1983, 1989, 2001, 2007, 2010, 2016, and 2019 SCF.
Wealth figures are deflated using the Consumer Price Index (CPI-U-RS).
a. Percentage change for lines 1 and 2; actual change for lines 3 and 4.

Table 2. Percentage of Households Holding Pension Wealth, 1989-2019

	1989	2001	2007	2019	Percentage Point Change 1989-01	2001-07	2007-19	1989-2019
A. All Households								
1. DC Accounts	24.0	52.2	52.6	50.5	28.2	0.4	-2.1	26.5
2. DB Plans	45.6	34.4	36.8	32.9	-11.2	2.3	-3.9	-12.7
3. Pension Wealth	56.0	65.6	65.1	63.2	9.6	-0.5	-1.9	7.2
B. Ages 46 and under								
1. DC Accounts	31.2	53.8	49.9	50.4	22.6	-3.9	0.5	19.2
2. DB Plans	37.9	22.8	24.6	22.8	-15.1	1.8	-1.7	-15.1
3. Pension Wealth	52.2	60.7	55.2	57.1	8.6	-5.5	1.8	4.9
C. Ages 47-64								
1. DC Accounts	28.3	62.0	63.8	56.2	33.7	1.8	-7.6	27.9
2. DB Plans	56.8	45.3	43.4	31.9	-11.5	-1.9	-11.5	-24.9
3. Pension Wealth	67.5	75.9	75.7	65.7	8.4	-0.2	-10.0	-1.7
D. Ages 65 and over								
1. DC Accounts	1.3	35.0	40.8	43.7	33.7	5.8	2.9	42.4
2. DB Plans	51.3	46.5	52.2	49.5	-4.7	5.7	-2.7	-1.8
3. Pension Wealth	51.8	62.6	69.5	69.6	10.8	6.9	0.1	17.8

Note: author's computations from the 1989, 2001, 2007, and 2019 SCF.
Households are classified into age groups by the age of the head of household. Key:
Pension Wealth PW = DBW + DCW

Table 3. Percentage Change in Household Pension Wealth, 1983-2019

	1989-2001	2001-2007	2007-2019	2019-2020	1989-2019
A. All Households					
1. Mean DC Pension Wealth	515.6	22.2	36.0	0.0	922.9
2. Mean DB Pension Wealth	6.2	5.5	8.0	-3.6	21.0
3. Mean Pension Wealth	86.3	14.2	23.3	-1.4	162.4
Memo: Median PW among PW Holders Only	38.7	18.8	9.0	-0.9	79.7
B. Ages 46 and under					
1. Mean DC Pension Wealth	271.5	-7.2	22.9	0.0	323.8
2. Mean DB Pension Wealth	-16.3	21.0	-15.5	-2.5	-14.4
3. Mean Pension Wealth	61.0	3.6	7.6	-0.8	79.3
Memo: Median PW among PW Holders Only	17.5	15.9	1.1	0.0	37.8
C. Ages 47-64					
1. Mean DC Pension Wealth	472.5	18.4	17.1	0.0	693.6
2. Mean DB Pension Wealth	2.1	-7.6	-21.4	-2.9	-25.8
3. Mean Pension Wealth	81.6	6.3	1.1	-0.9	95.0
Memo: Median PW among PW Holders Only	32.0	13.5	6.7	-0.9	59.8
D. Ages 65 and over					
1. Mean DC Pension Wealth	2750.3	34.8	68.7	0.0	6381.6
2. Mean DB Pension Wealth	12.1	2.2	34.7	-4.2	54.4
3. Mean Pension Wealth	85.8	15.7	50.2	-2.1	222.7
Memo: Median PW among PW Holders Only	52.7	-5.3	35.1	-4.2	95.5

Note: author's computations from the 1989, 2001, 2007, and 2019 SCF.
See the notes to Appendix Table 2 for methodological details.
The 2020 figure is based on the 2019 SCF and 2020 mortality rates.
Households are classified into age groups by the age of the head of household. Key:
Pension Wealth PW = DB + DC

Table 4. Percentage Change in Social Security and Augmented Wealth, 1983-2019

	1989-2001	2001-2007	2007-2019	2019-2020	1989-2019
I. Mean Values					
A. All Households					
1. Social Security Wealth SSW	46.0	1.2	12.3	-6.1	65.9
2. Net Worth (NW)	48.8	20.4	9.2	0.0	95.7
3. Augmented Wealth (AW)	39.4	14.4	9.9	-1.7	75.3
B. Ages 46 and under					
1. Social Security Wealth SSW	38.3	-2.2	8.4	-7.4	46.7
2. Net Worth (NW)	19.7	2.4	-4.6	0.0	17.0
3. Augmented Wealth (AW)	22.3	1.8	-0.3	-3.2	24.1
C. Ages 47-64					
1. Social Security Wealth SSW	56.0	-0.1	4.3	-5.8	62.5
2. Net Worth (NW)	46.9	14.7	3.3	0.0	73.9
3. Augmented Wealth (AW)	41.9	9.4	1.4	-1.4	57.3
D. Ages 65 and over					
1. Social Security Wealth SSW	34.6	-1.2	26.4	-5.3	68.0
2. Net Worth (NW)	43.8	23.9	8.5	0.0	93.4
3. Augmented Wealth (AW)	37.6	17.1	14.1	-1.4	83.9
II. Median Values					
A. All Households					
1. Social Security Wealth SSW	40.6	-1.5	12.0	-7.1	55.0
2. Net Worth (NW)	19.9	19.0	-20.4	0.0	13.6
3. Augmented Wealth (AW)	23.3	11.4	-3.6	-4.8	32.4
B. Ages 46 and under					
1. Social Security Wealth SSW	36.6	-6.1	3.3	-8.6	32.5
2. Net Worth (NW)	-13.0	-9.9	-33.5	0.0	-47.9
3. Augmented Wealth (AW)	17.6	-5.7	2.5	-7.9	13.6
C. Ages 47-64					
1. Social Security Wealth SSW	49.4	-5.2	5.6	-6.4	49.7
2. Net Worth (NW)	3.3	28.4	-34.1	0.0	-12.6
3. Augmented Wealth (AW)	27.4	2.1	-17.7	-4.1	7.0
D. Ages 65 and over					
1. Social Security Wealth SSW	40.3	-10.8	39.9	-5.0	75.2
2. Net Worth (NW)	37.8	19.8	-5.7	0.0	55.7
3. Augmented Wealth (AW)	37.2	2.1	12.8	-3.3	58.1

Note: author's computations from the 1989, 2001, 2007, and 2019 SCF.
See the notes to Appendix Tables 3 and 4 for methodological details.
The 2020 figure is based on the 2019 SCF and 2020 mortality rates.
Households are classified into age groups by the age of the head of household. Key:
Augmented Wealth AW = NW+DBW+SSW

Table 5. Change over Time in the Inequality of Social Security and Augmented Wealth, 1983-2019
(Gini coefficients)

	1989-2001	2001-2007	2007-2019	2019-2020	1989-2019
A. All Households					
1. Pension Wealth (PW)	-0.011	-0.005	0.019	0.002	0.002
2. Social Security Wealth SSW	-0.026	0.019	-0.004	0.008	-0.011
4. Net Worth (NW)	-0.001	0.008	0.035	0.000	0.041
6. Augmented Wealth (AW)	-0.002	0.023	0.025	0.010	0.046
B. Ages 46 and under					
1. Pension Wealth (PW)	-0.009	0.009	0.002	0.001	0.003
2. Social Security Wealth SSW	0.013	0.008	0.020	0.008	0.041
4. Net Worth (NW)	-0.027	0.021	0.071	0.000	0.064
6. Augmented Wealth (AW)	-0.025	0.020	0.019	0.018	0.014
C. Ages 47-64					
1. Pension Wealth (PW)	0.010	-0.008	0.046	0.002	0.047
2. Social Security Wealth SSW	-0.017	0.008	0.007	0.006	-0.002
4. Net Worth (NW)	0.024	-0.003	0.046	0.000	0.067
6. Augmented Wealth (AW)	0.018	0.013	0.043	0.009	0.074
D. Ages 65 and over					
1. Pension Wealth (PW)	-0.042	0.001	-0.001	0.003	-0.042
2. Social Security Wealth SSW	-0.108	0.059	-0.061	0.005	-0.109
4. Net Worth (NW)	-0.016	0.022	0.023	0.000	0.029
6. Augmented Wealth (AW)	-0.026	0.039	0.002	0.008	0.015

Note: author's computations from the 1989, 2001, 2007, and 2019 SCF.
See the notes to Appendix Table 5 for methodological details.
The 2020 figure is based on the 2019 SCF and 2020 mortality rates.
Households are classified into age groups by the age of the head of household. Key:
Augmented Wealth AW = NW+DBW+SSW

Table 6. The Composition of Augmented Wealth, 1983-2019
(Percentage)

Component	1989	2001	2007	2019	2020	Percentage Point Change 2019-20	Percentage Point Change 1989-2019
A. All Households							
1. Non-Pension Net Worth (NWX)	62.6	57.3	60.2	56.3	57.3	1.0	-5.1
2. DC Wealth (DCW)	2.2	9.4	10.1	12.2	12.4	0.2	10.2
3. DB Wealth (DBW)	11.8	8.7	8.0	7.9	7.8	-0.1	-3.9
4. Social Security Wealth SSW	23.4	24.5	21.7	23.5	22.5	-1.1	-1.2
Augmented Wealth (AW)	100.0	100.0	100.0	100.0	100.0	0.0	-0.1
B. Ages 46 and under							
1. Non-Pension Net Worth (NWX)	56.0	48.6	49.7	44.2	45.6	1.4	-10.6
2. DC Wealth (DCW)	3.2	9.3	8.5	10.3	10.6	0.3	7.3
3. DB Wealth (DBW)	8.7	5.7	6.8	4.7	4.7	0.0	-2.7
4. Social Security Wealth SSW	32.1	36.3	34.9	40.9	39.1	-1.8	6.1
Augmented Wealth (AW)	100.0	100.0	100.0	100.0	100.0	0.0	0.0
C. Ages 47-64							
1. Non-Pension Net Worth (NWX)	63.8	57.9	60.3	58.7	59.5	0.8	-4.0
2. DC Wealth (DCW)	2.9	11.1	12.1	13.7	13.9	0.2	11.0
3. DB Wealth (DBW)	14.0	9.7	8.2	6.6	6.5	-0.1	-7.7
4. Social Security Wealth SSW	19.3	21.3	19.4	21.1	20.2	-0.9	0.7
Augmented Wealth (AW)	100.0	100.0	100.0	100.0	100.0	0.0	0.0
D. Ages 65 and over							
1. Non-Pension Net Worth (NWX)	68.0	64.6	67.7	59.2	60.1	0.9	-7.5
2. DC Wealth (DCW)	0.3	6.9	7.9	11.5	11.6	0.2	11.3
3. DB Wealth (DBW)	12.4	9.8	8.5	11.0	10.7	-0.3	-2.2
4. Social Security Wealth SSW	19.2	18.8	15.9	18.3	17.6	-0.7	-1.6
Augmented Wealth (AW)	100.0	100.0	100.0	100.0	100.0	0.0	0.0

Note: author's computations from the 1989, 2001, 2007, and 2019 SCF.
See the notes to Appendix Table 6 for methodological details.
The 2020 figure is based on the 2019 SCF and 2020 mortality rates.
Households are classified into age groups by the age of the head of household. Key:
Augmented Wealth AW = NW+DBW+SSW

Table 7. Household Income and Wealth by Race and Ethnicity, 1983-2019

(In thousands, 2019 dollars)

Component	1983	1989	2001	2007	2010	2016	2019
A. Mean Income							
Whites	76.2	84.7	109.9	114.1	102.0	125.6	117.8
Blacks	41.0	37.7	53.2	55.1	48.7	57.4	55.2
Hispanics	46.1	38.6	54.4	57.3	57.7	60.7	60.5
Ratio of Blacks/Whites	0.54	0.45	0.48	0.48	0.48	0.46	0.47
Ratio of Hispanics/Whites	0.60	0.46	0.50	0.50	0.57	0.48	0.51
B. Median Income							
Whites	53.6	56.5	63.7	61.8	59.9	63.9	66.0
Blacks	29.9	21.4	36.2	37.1	35.3	37.3	38.0
Hispanics	35.5	27.1	34.7	43.3	40.0	41.5	42.0
Ratio of Blacks/Whites	0.56	0.38	0.57	0.60	0.59	0.58	0.58
Ratio of Hispanics/Whites	0.66	0.48	0.55	0.70	0.67	0.65	0.64
C. Mean Net Worth							
Whites	371.6	446.4	674.3	806.1	711.0	932.8	925.2
Blacks	69.9	74.8	96.0	151.6	102.1	134.6	126.6
Hispanics	60.4	73.5	115.9	210.6	109.3	176.7	173.5
Ratio of Blacks/Whites	0.19	0.17	0.14	0.19	0.14	0.14	0.14
Ratio of Hispanics/Whites	0.16	0.16	0.17	0.26	0.15	0.19	0.19
D. Median Net Worth							
Whites	107.0	129.0	154.0	177.5	121.5	149.6	160.2
Blacks	7.1	3.3	15.4	11.4	7.4	3.7	9.0
Hispanics	4.1	2.7	4.3	11.3	3.2	6.7	14.0
Ratio of Blacks/Whites	0.07	0.03	0.10	0.06	0.06	0.02	0.06
Ratio of Hispanics/Whites	0.04	0.02	0.03	0.06	0.03	0.04	0.09
E. Homeownership Rate (in Percent)							
Whites	68.1	69.3	74.1	74.8	74.6	71.9	72.8
Blacks	44.3	41.7	47.4	48.6	47.7	44.0	44.0
Hispanics	32.6	39.8	44.3	49.2	47.3	45.4	47.3
Ratio of Blacks/Whites	0.65	0.60	0.64	0.65	0.64	0.61	0.61
Ratio of Hispanics/Whites	0.48	0.57	0.60	0.66	0.63	0.63	0.65

Source: author's computations from the SCF.

Dollar figures are deflated by the CPI-U-RS.

Households are divided into four racial/ethnic groups: (I) non-Hispanic whites; (ii) non-Hispanic blacks; (iii) Hispanics; and (iv) American Indians, Asians, and others. For 1995, 1998, and 2001, the classification scheme does not explicitly indicate non-Hispanic whites and non-Hispanic blacks for the first two categories so that some Hispanics may have classified themselves as either whites or blacks.

Table 8. Pension Coverage Rates by Race and Ethnicity, 1989-2019

(Percentages)					Percentage Point Change			
Category	1989	2001	2007	2019	1989-2001	2001-2007	2007-2019	1989-2019
I. Coverage Rates								
A. Non-Hispanic Whites								
DC Wealth DCW	26.2	56.9	57.4	56.6	30.6	0.5	-0.8	30.4
DB Wealth DBW	50.5	37.4	40.0	36.5	-13.1	2.5	-3.5	-14.0
Pension Wealth PW	61.5	70.5	70.1	69.9	9.0	-0.4	-0.5	8.3
B. Non-Hispanic Blacks								
DC Wealth DCW	15.8	38.9	36.6	34.8	23.2	-2.4	-4.2	19.1
DB Wealth DBW	34.0	27.7	32.7	29.6	-6.3	5.0	-3.1	-4.4
Pension Wealth PW	39.8	52.6	52.5	49.3	12.9	-0.2	-3.9	9.5
C. Hispanics								
DC Wealth DCW	12.6	30.8	32.0	29.0	18.2	1.2	-4.4	16.4
DB Wealth DBW	24.6	21.1	18.6	18.1	-3.5	-2.5	-3.5	-6.4
Pension Wealth PW	31.4	42.5	39.4	38.7	11.1	-3.0	-3.5	7.3
II. Differences in Pension Coverage by Component								
A. Whites minus Blacks	1989	2001	2007	2019				
DC Wealth DCW	10.5	17.9	20.8	21.8				
DB Wealth DBW	16.5	9.7	7.3	6.9				
Pension Wealth PW	21.7	17.9	17.6	20.5				
B. Whites minus Hispanics								
DC Wealth DCW	13.6	26.1	25.4	27.6				
DB Wealth DBW	26.0	16.3	21.4	18.4				
Pension Wealth PW	30.1	28.0	30.6	31.2				

Source: author's computations from the SCF.
Households are classified into age groups by the age of the head of household.
Key:
Pension Wealth PW = DCW + DBW

Table 9. Mean Retirement Wealth by Race and Ethnicity, 1989-2019

Category	1989-2001	2001-2007	2007-2019	2019-2020	1989-2019
I. Percentage Change					
A. Non-Hispanic Whites					
Pension Wealth PW	89.9	15.3	28.8	-1.0	182.2
DB Wealth DBW	5.0	6.5	13.2	-2.7	26.7
DC Wealth DCW	515.4	22.8	40.8	0.0	964.5
Social Security Wealth SSW	48.5	0.1	13.7	-4.7	69.0
B. Non-Hispanic Blacks					
Pension Wealth PW	56.0	25.1	13.8	-5.0	122.2
DB Wealth DBW	24.5	10.6	6.8	-8.2	47.1
DC Wealth DCW	413.8	64.5	26.7	0.0	970.5
Social Security Wealth SSW	78.2	9.5	14.5	-11.5	123.4
C. Hispanics					
Pension Wealth PW	67.5	24.5	7.6	-4.4	124.3
DB Wealth DBW	27.0	5.0	-15.2	-9.6	13.1
DC Wealth DCW	336.0	62.3	39.3	0.0	885.6
Social Security Wealth SSW	65.9	10.1	12.8	-13.1	106.1
	1989	**2001**	**2007**	**2019**	**2020 Mortality Rates**
II. Ratios in Retirement Wealth by Component					
A. Blacks/Whites					
Pension Wealth PW	0.455	0.374	0.398	0.352	0.338
DB Wealth DBW	0.500	0.592	0.592	0.559	0.527
DC Wealth DCW	0.224	0.187	0.250	0.225	0.225
Social Security Wealth SSW	0.437	0.525	0.595	0.599	0.556
B. Hispanics/Whites					
Pension Wealth PW	0.287	0.253	0.287	0.240	0.232
DB Wealth DBW	0.300	0.363	0.386	0.289	0.269
DC Wealth DCW	0.226	0.160	0.212	0.209	0.209
Social Security Wealth SSW	0.475	0.531	0.765	0.759	0.692

Source: author's computations from the SCF.
See the notes to Appendix Table 2 for methodological details.
The 2020 figure is based on the 2019 SCF and 2020 mortality rates.
Households are classified into age groups by the age of the head of household. Key:
Pension Wealth PW = DB + DC

Table 10. Mean and Median Augmented Wealth by Race and Ethnicity, 1989-2019

Category	1989-2001	2001-2007	2007-2019	2019-2020	1989-2019
I. Percentage Change					
A. Non-Hispanic Whites					
Mean Net Worth NW	51.0	19.6	14.8	0.0	107.2
Mean Augmented Wealth AW	45.3	14.0	14.5	-1.2	89.7
Median NW	18.3	15.3	-9.8	0.0	23.1
Median AW	28.2	4.5	1.8	-2.6	36.3
B. Non-Hispanic Blacks					
Mean Net Worth NW	28.2	57.9	-16.5	0.0	69.0
Mean Augmented Wealth AW	45.8	27.4	-0.5	-6.7	84.9
Median NW	359.3	-25.9	-21.0	0.0	168.8
Median AW	76.5	6.4	9.4	-9.3	105.4
C. Hispanics					
Mean Net Worth NW	57.6	81.6	-17.6	0.0	135.9
Mean Augmented Wealth AW	59.2	40.8	-4.4	-7.3	114.4
Median NW	56.0	163.7	24.3	0.0	411.5
Median AW	68.4	0.1	19.0	-12.1	100.6
	1989	2001	2007	2019	2020 Mortality Rates
II. Ratios in Augmented Wealth by Component					
A. Blacks/Whites					
Mean Net Worth NW	0.168	0.142	0.188	0.137	0.137
Mean Augmented Wealth AW	0.267	0.267	0.299	0.266	0.251
Median NW	0.026	0.100	0.064	0.056	0.056
Median AW	0.244	0.335	0.341	0.388	0.362
B. Hispanics/Whites					
Mean Net Worth NW	0.165	0.172	0.261	0.187	0.187
Mean Augmented Wealth AW	0.247	0.270	0.334	0.315	0.296
Median NW	0.021	0.028	0.063	0.087	0.087
Median AW	0.254	0.334	0.320	0.484	0.437

Source: author's computations from the SCF.
See the notes to Appendix Table 2 for methodological details.
The 2020 figure is based on the 2019 SCF and 2020 mortality rates.
Households are classified into age groups by the age of the head of household. Key:
Augmented Wealth AW = NW + DBW + SSW

Table 11. Retirement and Augmented Wealth for Black Households by Age Class, 2019: Counterfactual Scenario of Equating Black Mortality Rates to White Levels

Category	All Age Groups	Ages 46 and under	Ages 47-64	Ages 65 and over
I. Percentage Difference in Mean Values between Counterfactual and Actual for Black Households				
DB Wealth DBW	11.3	19.1	14.6	6.0
Social Security Wealth SSW	12.5	16.8	13.0	6.6
Retirement Wealth RW	10.5	15.0	10.6	5.9
Augmented Wealth AW	7.7	13.5	7.4	4.0
II. Black/White Ratios in Mean Retirement and Augmented Wealth by Component				
A. Actual Ratios				
DB Wealth DBW	0.56	0.58	0.69	0.63
Social Security Wealth SSW	0.60	0.58	0.61	0.67
Retirement Wealth RW	0.48	0.52	0.51	0.49
Augmented Wealth AW	0.27	0.31	0.29	0.28
B. Counterfactual Ratios				
DB Wealth DBW	0.62	0.69	0.79	0.67
Social Security Wealth SSW	0.67	0.67	0.69	0.71
Retirement Wealth RW	0.53	0.60	0.57	0.52
Augmented Wealth AW	0.29	0.35	0.31	0.29
C. Difference between Counterfactual Ratios and Actual Ratios				
DB Wealth DBW	0.06	0.11	0.10	0.04
Social Security Wealth SSW	0.07	0.10	0.08	0.04
Retirement Wealth RW	0.05	0.08	0.05	0.03
Augmented Wealth AW	0.02	0.04	0.02	0.01
D. Percentage Contribution of Mortality Rate Differences to Explaining Black/White Ratio[a]				
DB Wealth DBW	10.15	16.04	12.72	5.63
Social Security Wealth SSW	11.13	14.39	11.47	6.16
Retirement Wealth RW	9.47	13.06	9.62	5.58
Augmented Wealth AW	7.18	11.92	6.92	3.89

III. Percentage Difference in Median Values between Counterfatual and Actual for Black Households				
Social Security Wealth SSW	**12.7**	**17.5**	**12.0**	**6.7**
Retirement Wealth RW	**11.9**	**15.8**	**11.3**	**4.6**
Augmented Wealth AW	**10.5**	**21.3**	**6.9**	**5.9**
IV. Black/White Ratios in Median Retirement and Augmented Wealth by Component				
A. Actual Ratios				
Social Security Wealth SSW	**0.56**	**0.54**	**0.49**	**0.71**
Retirement Wealth RW	**0.50**	**0.51**	**0.49**	**0.63**
Augmented Wealth AW	**0.39**	**0.42**	**0.37**	**0.44**
B. Counterfactual Ratios				
Social Security Wealth SSW	**0.68**	**0.72**	**0.60**	**0.77**
Retirement Wealth RW	**0.60**	**0.66**	**0.58**	**0.67**
Augmented Wealth AW	**0.43**	**0.50**	**0.40**	**0.46**
C. Difference between Counterfactual Ratios and Actual Ratios				
Social Security Wealth SSW	**0.12**	**0.18**	**0.11**	**0.06**
Retirement Wealth RW	**0.10**	**0.15**	**0.09**	**0.04**
Augmented Wealth AW	**0.04**	**0.09**	**0.03**	**0.03**
D. Percentage Contribution of Mortality Rate Differences to Explaining Black/White Ratio[a]				
Social Security Wealth SSW	**17.38**	**25.23**	**18.70**	**7.99**
Retirement Wealth RW	**16.69**	**23.11**	**15.92**	**6.10**
Augmented Wealth AW	**9.54**	**17.56**	**6.41**	**5.56**

Note: author's computations from the 2019 SCF.

Households are classified into age groups by the age of the head of household.

Retirement Wealth RW = PW + SSW

Augmented Wealth AW =NW + DBW + SSW

a. Defined as the ratio of the difference between the counterfactual ratio and the actual ratio divided by the counterfactual ratio.

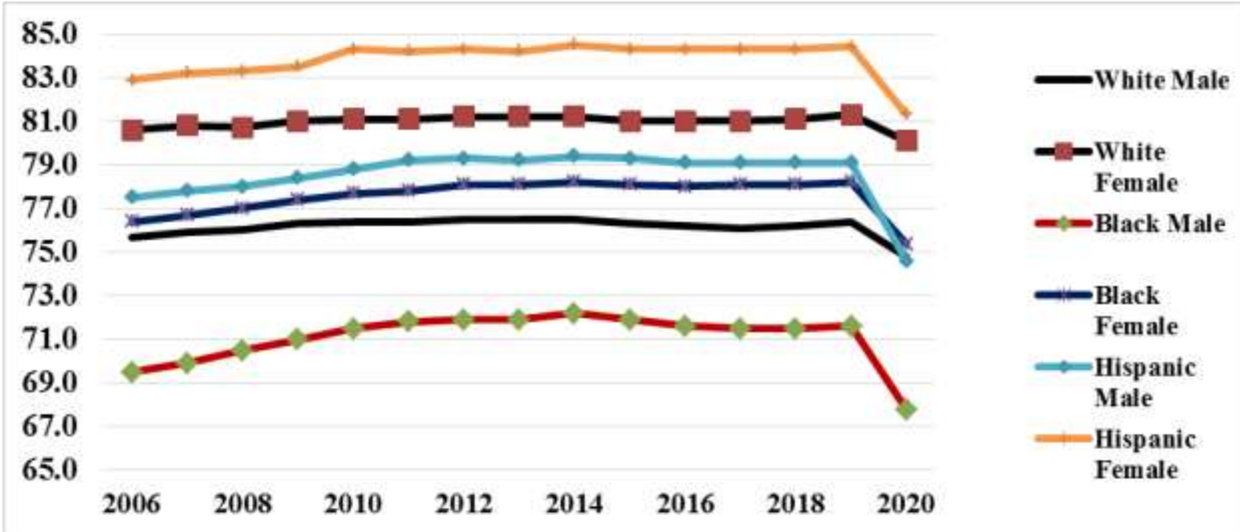

Figure 1. Life Expectancy at birth by race/ethnicity and gender, 2006-2020

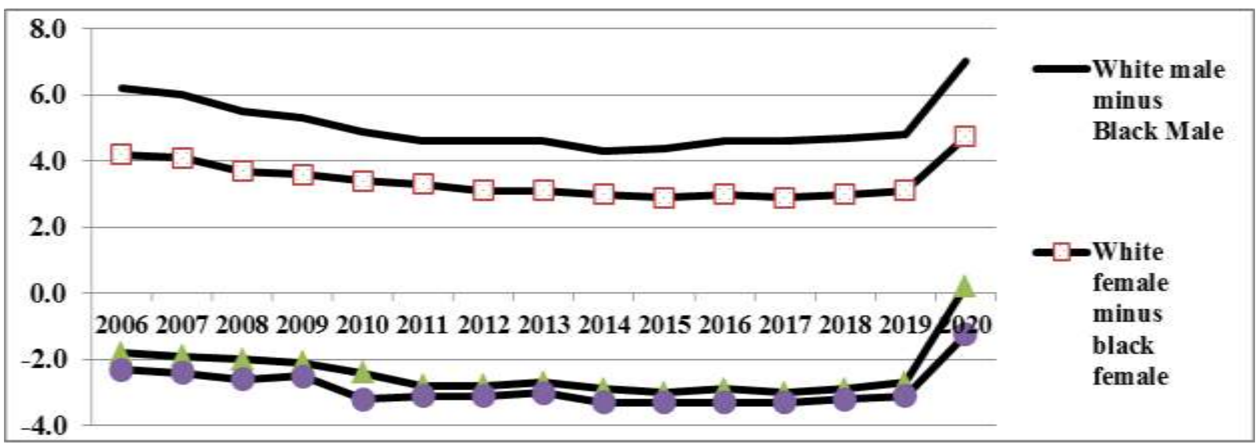

Figure 2. Gaps in life expectancy at birth by race/ethnicity and gender, 2006-2020 (in years)

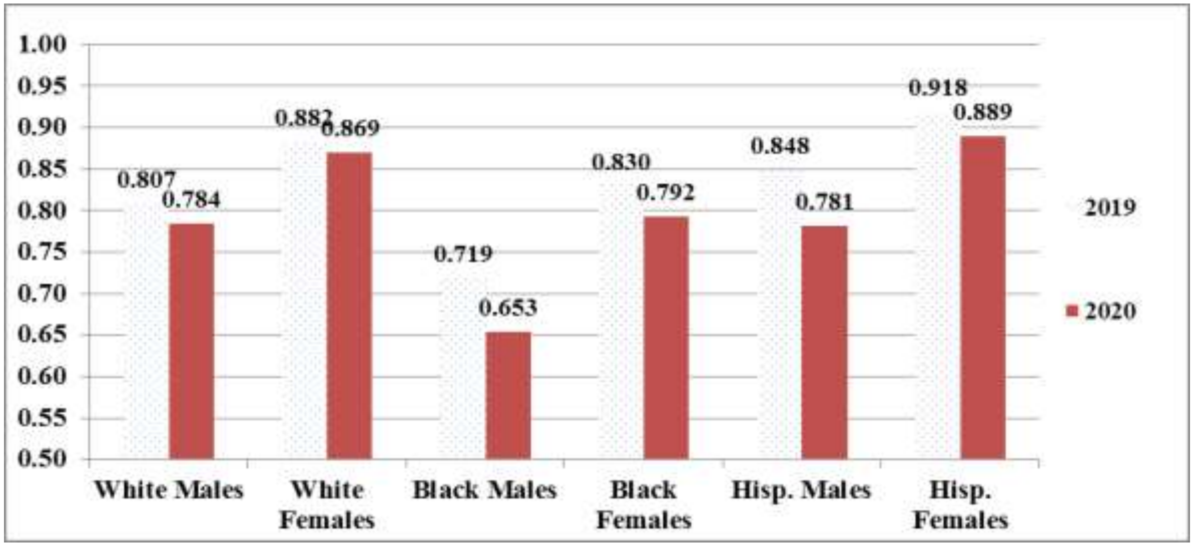

Figure 3 Probability of an 18-year old surviving to age 65 by race/ethnicity and gender in 2019 and 2020

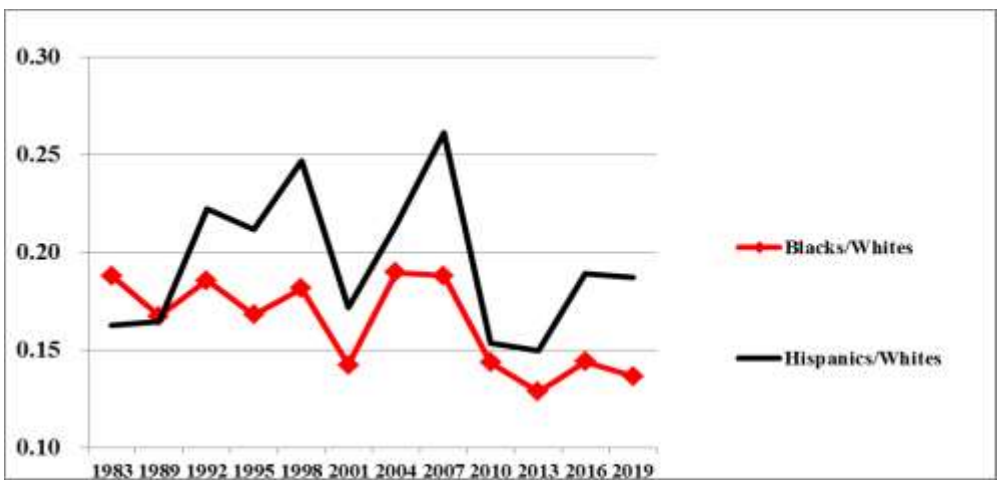

Figure 4. Ratio of Mean Net Worth between Racial and Ethnic Groups, 1983-2019

Appendix Table 1. Percentage of Households Holding Pension Wealth, 1983-2019

	1983	1989	2001	2007	2010	2019	Percentage Point Change 1983-89	1989-01	2001-07	2007-10	2010-19	1983-2019	1989-2019
<u>A. All Households</u>													
1. DC Accounts	11.1	24.0	52.2	52.6	50.4	50.5	12.9	28.2	0.4	-2.3	0.2	39.5	26.5
2. DB Plans	--	45.6	34.4	36.8	32.7	32.9	--	-11.2	2.3	-4.1	0.2		-12.7
3. Pension Wealth	--	56.0	65.6	65.1	62.6	63.2	--	9.6	-0.5	-2.5	0.6		7.2
<u>B. Ages 46 and under</u>													
1. DC Accounts	13.7	31.2	53.8	49.9	47.9	50.4	17.5	22.6	-3.9	-2.0	2.5	36.6	19.2
2. DB Plans	--	37.9	22.8	24.6	20.6	22.8	--	-15.1	1.8	-4.0	2.3		-15.1
3. Pension Wealth	--	52.2	60.7	55.2	53.5	57.1	--	8.6	-5.5	-1.7	3.6		4.9
<u>C. Ages 47-64</u>													
1. DC Accounts	12.3	28.3	62.0	63.8	59.6	56.2	16.0	33.7	1.8	-4.2	-3.4	43.9	27.9
2. DB Plans	68.5	56.8	45.3	43.4	36.3	31.9	-11.7	-11.5	-1.9	-7.1	-4.4	-36.6	-24.9
3. Pension Wealth	70.3	67.5	75.9	75.7	70.1	65.7	-2.8	8.4	-0.2	-5.6	-4.4	-4.5	-1.7
<u>D. Ages 65 and over</u>													
1. DC Accounts	2.0	1.3	35.0	40.8	41.0	43.7	-0.7	33.7	5.8	0.2	2.7	41.7	42.4
2. DB Plans	67.0	51.3	46.5	52.2	50.8	49.5	-15.7	-4.7	5.7	-1.4	-1.3	-17.5	-1.8
3. Pension Wealth	67.8	51.8	62.6	69.5	68.9	69.6	-15.9	10.8	6.9	-0.6	0.7	1.8	17.8

Note: author's computations from the 1983, 1989, 2001, 2007, 2010, and 2019 SCF.
Households are classified into age groups by the age of the head of household.
Key:
Pension Wealth PW = DBW + DCW

Appendix Table 2. Household Pension Wealth, 1983-2019

(In thousands, 2019 dollars)

	Old series				New series			2020 Mortality Rates
	1983	1989	2001	2007	2007	2010	2019	
I. Mean Values								
A. All Households								
1. Mean DC Pension Wealth	5.4	12.6	77.7	94.9	94.9	101.1	129.1	129.1
2. Mean DB Pension Wealth	--	67.5	71.7	75.6	77.8	71.3	84.0	81.0
3. Mean Pension Wealth	--	80.2	149.4	170.6	172.7	172.4	213.0	210.0
Memo: Median PW among PW Holders Only	--	70.1	97.3	115.6	114.6	99.7	125.0	123.9
B. Ages 46 and under								
1. Mean DC Pension Wealth	3.5	11.0	40.9	37.9	37.9	35.7	46.6	46.6
2. Mean DB Pension Wealth	--	30.0	25.1	30.4	25.2	19.1	21.3	20.8
3. Mean Pension Wealth	--	41.0	66.0	68.3	63.2	54.9	67.9	67.4
Memo: Median PW among PW Holders Only	--	38.1	44.8	51.9	49.4	41.1	50.0	50.0
C. Ages 47-64								
1. Mean DC Pension Wealth	11.4	24.4	139.8	165.4	165.4	169.2	193.7	193.7
2. Mean DB Pension Wealth	105.9	119.7	122.2	113.0	118.2	103.3	92.9	90.3
3. Mean Pension Wealth	117.3	144.3	262.0	278.4	283.7	272.5	286.7	284.0
Memo: Median PW among PW Holders Only	100.5	123.8	163.4	185.4	191.0	176.5	203.8	202.0
D. Ages 65 and over								
1. Mean DC Pension Wealth	2.4	2.7	77.5	104.5	104.5	123.9	176.3	176.3
2. Mean DB Pension Wealth	86.6	98.4	110.3	112.8	125.7	124.0	169.3	162.1
3. Mean Pension Wealth	89.0	101.1	187.8	217.2	230.2	247.9	345.6	338.4
Memo: Median PW among PW Holders Only	97.2	102.5	156.6	148.3	154.5	160.8	208.8	200.0

	Old series			New series			Combined series	
II. Percentage Change	1983-89	1989-01	2001-07	2007-10	2010-19	2019-20	1983-2019	1989-2019
A. All Households								
1. Mean DC Pension Wealth	132.1	515.6	22.2	6.5	27.6	0.0	2273.7	922.9
2. Mean DB Pension Wealth	--	6.2	5.5	-8.3	17.8	-3.6	--	21.0
3. Mean Pension Wealth	--	86.3	14.2	-0.2	23.5	-1.4	--	162.4
Memo: Median PW among	--	38.7	18.8	-13.0	25.3	-0.9	--	79.7

PW Holders Only								
B. Ages 46 and under								
1. Mean DC Pension Wealth	215.6	271.5	-7.2	-5.8	30.5	0.0	1237.5	323.8
2. Mean DB Pension Wealth	--	-16.3	21.0	-24.2	11.4	-2.5	--	-14.4
3. Mean Pension Wealth	--	61.0	3.6	-13.1	23.8	-0.8	--	79.3
Memo: Median PW among PW Holders Only	--	17.5	15.9	-16.8	21.6	0.0	--	37.8
C. Ages 47-64								
1. Mean DC Pension Wealth	114.5	472.5	18.4	2.3	14.5	0.0	1602.0	693.6
2. Mean DB Pension Wealth	13.0	2.1	-7.6	-12.6	-10.0	-2.9	-16.1	-25.8
3. Mean Pension Wealth	23.0	81.6	6.3	-3.9	5.2	-0.9	139.8	95.0
Memo: Median PW among PW Holders Only	23.2	32.0	13.5	-7.6	15.5	-0.9	96.9	59.8
D. Ages 65 and over								
1. Mean DC Pension Wealth	12.8	2750.3	34.8	18.6	42.3	0.0	7210.7	6381.6
2. Mean DB Pension Wealth	13.7	12.1	2.2	-1.3	36.5	-4.2	75.5	54.4
3. Mean Pension Wealth	13.6	85.8	15.7	7.7	39.4	-2.1	266.6	222.7
Memo: Median PW among PW Holders Only	5.5	52.7	-5.3	4.1	29.8	-4.2	106.3	95.5

Note: author's computations from the 1983, 1989, 2001, 2007, 2010, and 2019 SCF.
The "old series" is based on mortality rates for whites and blacks. The new series is based on mortality rates for non-Hispanic whites, non-Hispanic blacks, and Hispanics. The "combined series" uses the percentage change for 1983 (or 1989)- 2007 based on the old series and the percentage change for 2007-2019 based on the new series.
Dollar figures are converted to 2019 dollars based on the CPI-U-RS price deflator.
Households are classified into age groups by the age of the head of household. Key:
Pension Wealth PW = DB + DC

Appendix Table 3. Mean Social Security, Retirement and Augmented Wealth, 1983-2019

(In thousands, 2019 dollars)

	Old series				New series			2020 Mortality Rates
	1983	1989	2001	2007	2007	2010	2019	
I. Mean Values								
A. All Households								
1. Social Security Wealth SSW	--	138.1	201.5	203.9	221.3	201.3	248.5	233.3
2. Retirement Wealth RW	--	220.8	350.5	374.2	394.0	376.2	461.5	443.2
3. Net Worth (NW)	318.0	369.9	550.3	662.6	662.6	556.2	723.8	723.8
4. Private Augmented Wealth (PAW)	--	451.7	620.8	737.1	740.7	627.7	808.4	805.4
5. Augmented Wealth (AW)	--	589.8	822.3	941.1	962.0	831.9	1056.9	1038.7
B. Ages 46 and under								
1. Social Security Wealth SSW	--	114.6	158.6	155.1	171.5	144.8	185.9	172.1
2. Retirement Wealth RW	--	157.0	224.4	223.4	234.7	200.4	253.8	239.5
3. Net Worth (NW)	156.2	211.2	252.9	258.9	259.4	171.1	247.5	247.5
4. Private Augmented Wealth (PAW)	--	242.2	278.0	289.3	284.6	190.2	268.8	268.2
5. Augmented Wealth (AW)	--	356.8	436.5	444.4	456.1	333.8	454.7	440.3
C. Ages 47-64								
1. Social Security Wealth SSW	195.6	170.8	266.4	266.1	287.1	248.0	299.5	282.1
2. Retirement Wealth RW	318.1	319.6	527.9	544.0	570.8	523.3	586.1	566.1
3. Net Worth (NW)	539.8	588.5	864.2	991.0	992.8	846.8	1025.4	1025.4
4. Private Augmented Wealth (PAW)	649.3	712.2	986.2	1103.8	1111.1	950.1	1118.3	1115.7
5. Augmented Wealth (AW)	844.2	882.9	1252.6	1369.8	1398.2	1198.6	1417.8	1397.8
D. Ages 65 and over								
1. Social Security Wealth SSW	172.7	157.4	211.8	209.3	223.1	239.4	281.9	267.0
2. Retirement Wealth RW	266.0	261.9	399.2	426.1	453.3	491.6	627.0	605.0
3. Net Worth (NW)	535.7	560.2	805.4	998.3	1000.1	862.0	1085.5	1085.5
4. Private Augmented Wealth (PAW)	624.1	661.8	915.4	1110.8	1125.8	986.0	1257.3	1250.1
5. Augmented Wealth (AW)	796.8	819.2	1127.3	1320.1	1349.0	1235.6	1539.2	1517.1

	Old series			New series			Combined series	
II. Percentage Change	1983-89	1989-01	2001-07	2007-10	2010-19	2019-20	1983-2019	1989-2019
A. All Households								
1. Social Security Wealth SSW	--	46.0	1.2	-9.0	23.4	-6.1	--	65.9
2. Retirement Wealth RW	--	58.8	6.7	-4.5	22.7	-4.0	--	98.5
3. Net Worth (NW)	16.3	48.8	20.4	-16.1	30.1	0.0	127.6	95.7

4. Private Augmented Wealth (PAW)	--	37.4	18.7	-15.3	28.8	-0.4	--	78.1
5. Augmented Wealth (AW)	--	39.4	14.4	-13.5	27.1	-1.7	--	75.3
B. Ages 46 and under								
1. Social Security Wealth SSW	--	38.3	-2.2	-15.6	28.4	-7.4	--	46.7
2. Retirement Wealth RW	--	43.0	-0.5	-14.6	26.7	-5.6	--	53.9
3. Net Worth (NW)	35.2	19.7	2.4	-34.0	44.6	0.0	58.2	17.0
4. Private Augmented Wealth (PAW)	--	14.8	4.1	-33.2	41.3	-0.2	--	12.8
5. Augmented Wealth (AW)	--	22.3	1.8	-26.8	36.2	-3.2	--	24.1
C. Ages 47-64								
1. Social Security Wealth SSW	-12.7	56.0	-0.1	-13.6	20.8	-5.8	41.9	62.5
2. Retirement Wealth RW	0.5	65.2	3.1	-8.3	12.0	-3.4	75.6	74.8
3. Net Worth (NW)	9.0	46.9	14.7	-14.7	21.1	0.0	89.6	73.9
4. Private Augmented Wealth (PAW)	9.7	38.5	11.9	-14.5	17.7	-0.2	71.1	56.0
5. Augmented Wealth (AW)	4.6	41.9	9.4	-14.3	18.3	-1.4	64.5	57.3
D. Ages 65 and over								
1. Social Security Wealth SSW	-8.8	34.6	-1.2	7.3	17.8	-5.3	53.1	68.0
2. Retirement Wealth RW	-1.6	52.4	6.7	8.4	27.6	-3.5	121.6	125.1
3. Net Worth (NW)	4.6	43.8	23.9	-13.8	25.9	0.0	102.3	93.4
4. Private Augmented Wealth (PAW)	6.0	38.3	21.3	-12.4	27.5	-0.6	98.8	87.4
5. Augmented Wealth (AW)	2.8	37.6	17.1	-8.4	24.6	-1.4	89.0	83.9

Note: author's computations from the 1983, 1989, 2001, 2007, 2010, and 2019 SCF.
The "old series" is based on mortality rates for whites and blacks. The new series is based on mortality rates for non-Hispanic whites, non-Hispanic blacks, and Hispanics. The "combined series" uses the percentage change for 1983 (or 1989) - 2007 based on the old series and the percentage change for 2007-2019 based on the new series.
Dollar figures are converted to 2019 dollars based on the CPI-U-RS price deflator.
Households are classified into age groups by the age of the head of household. Key:
Retirement Wealth RW = PW + SSW
Privately Accumulated Wealth PAW = NW + DBW
Augmented Wealth AW = NW+DBW+SSW

Appendix Table 4. Median Social Security, Retirement, and Augmented Wealth, 1983-2019

(In thousands, 2019 dollars)

	Old series				New series			2020 Mortality Rates
	1983	1989	2001	2007	2007	2010	2019	
I. Median Values								
A. All Households								
1. Social Security Wealth SSW	--	124.0	174.3	171.7	189.0	170.5	211.5	196.5
2. Retirement Wealth RW	--	155.5	227.6	231.5	251.4	222.3	276.3	258.1
3. Net Worth (NW)	81.7	88.8	106.4	126.7	126.7	71.0	100.8	100.8
4. Private Augmented Wealth (PAW)	--	140.7	146.0	176.1	177.5	106.3	144.8	144.3
5. Augmented Wealth (AW)	--	277.6	342.4	381.5	396.8	302.5	382.4	363.9
B. Ages 46 and under								
1. Social Security Wealth SSW	--	108.2	147.9	138.8	157.3	133.0	162.5	148.5
2. Retirement Wealth RW	--	123.8	168.2	161.0	177.0	149.8	190.5	174.9
3. Net Worth (NW)	37.5	34.3	29.9	26.9	26.9	9.2	17.9	17.9
4. Private Augmented Wealth (PAW)	--	49.9	47.5	43.2	41.7	16.8	33.0	32.9
5. Augmented Wealth (AW)	--	173.4	203.9	192.3	208.6	160.5	213.7	196.7
C. Ages 47-64								
1. Social Security Wealth SSW	183.9	170.4	254.7	241.5	264.0	229.7	278.9	261.2
2. Retirement Wealth RW	253.7	233.7	368.1	372.5	397.6	326.4	375.4	355.3
3. Net Worth (NW)	156.5	192.4	198.7	255.2	255.2	155.4	168.2	168.2
4. Private Augmented Wealth (PAW)	265.6	279.9	307.7	350.1	358.3	234.3	234.4	231.7
5. Augmented Wealth (AW)	449.9	460.4	586.5	598.8	634.2	474.7	521.9	500.4
D. Ages 65 and over								
1. Social Security Wealth SSW	159.2	130.7	183.4	163.6	172.4	203.3	241.3	229.2
2. Retirement Wealth RW	227.5	189.4	269.9	261.3	275.9	311.9	372.0	354.8
3. Net Worth (NW)	151.2	158.0	217.7	260.9	260.9	229.2	246.0	246.0
4. Private Augmented Wealth (PAW)	236.8	231.5	318.9	341.9	349.5	327.9	364.9	360.2
5. Augmented Wealth (AW)	422.3	383.4	526.1	537.3	556.4	570.9	627.8	607.1

	Old series			New series			Combined series	
II. Percentage Change	1983-89	1989-01	2001-07	2007-10	2010-19	2019-20	1983-2019	1989-2019
A. All Households								
1. Social Security Wealth SSW	--	40.6	-1.5	-9.8	24.1	-7.1	--	55.0
2. Retirement Wealth RW	--	46.4	1.7	-11.5	24.3	-6.6	--	63.6
3. Net Worth (NW)	8.7	19.9	19.0	-43.9	41.9	0.0	23.4	13.6

4. Private Augmented Wealth (PAW)	--	3.7	20.7	-40.1	36.3	-0.4	--	2.2
5. Augmented Wealth (AW)	--	23.3	11.4	-23.8	26.4	-4.8	--	32.4
B. Ages 46 and under								
1. Social Security Wealth SSW	--	36.6	-6.1	-15.5	22.2	-8.6	--	32.5
2. Retirement Wealth RW	--	35.9	-4.3	-15.4	27.2	-8.2	--	39.9
3. Net Worth (NW)	-8.5	-13.0	-9.9	-66.0	95.3	0.0	-52.3	-47.9
4. Private Augmented Wealth (PAW)	--	-4.8	-9.2	-59.6	96.2	-0.4	--	-31.5
5. Augmented Wealth (AW)	--	17.6	-5.7	-23.1	33.2	-7.9	--	13.6
C. Ages 47-64								
1. Social Security Wealth SSW	-7.3	49.4	-5.2	-13.0	21.4	-6.4	38.7	49.7
2. Retirement Wealth RW	-7.9	57.5	1.2	-17.9	15.0	-5.3	38.6	50.5
3. Net Worth (NW)	23.0	3.3	28.4	-39.1	8.2	0.0	7.5	-12.6
4. Private Augmented Wealth (PAW)	5.4	9.9	13.8	-34.6	0.0	-1.2	-13.8	-18.2
5. Augmented Wealth (AW)	2.3	27.4	2.1	-25.2	9.9	-4.1	9.5	7.0
D. Ages 65 and over								
1. Social Security Wealth SSW	-17.9	40.3	-10.8	17.9	18.7	-5.0	43.8	75.2
2. Retirement Wealth RW	-16.7	42.5	-3.2	13.1	19.3	-4.6	54.9	86.0
3. Net Worth (NW)	4.5	37.8	19.8	-12.2	7.3	0.0	62.7	55.7
4. Private Augmented Wealth (PAW)	-2.2	37.8	7.2	-6.2	11.3	-1.3	50.8	54.2
5. Augmented Wealth (AW)	-9.2	37.2	2.1	2.6	10.0	-3.3	43.6	58.1

Note: author's computations from the 1983, 1989, 2001, 2007, 2010, and 2019 SCF.
The "old series" is based on mortality rates for whites and blacks. The new series is based on mortality rates for non-Hispanic whites, non-Hispanic blacks, and Hispanics. The "combined series" uses the percentage change for 1983 (or 1989) - 2007 based on the old series and the percentage change for 2007-2019 based on the new series.
Dollar figures are converted to 2019 dollars based on the CPI-U-RS price deflator.
Households are classified into age groups by the age of the head of household. Key:
Retirement Wealth RW = PW + SSW
Privately Accumulated Wealth PAW = NW + DBW
Augmented Wealth AW = NW+DBW+SSW

Appendix Table 5. Inequality of Social Security and Augmented Wealth, 1983-2019

(Gini coefficients)

	Old series				New series			2020 Mortality Rates
	1983	1989	2001	2007	2007	2010	2019	
I. Gini Coefficients								
A. All Households								
1. Pension Wealth (PW)	--	0.799	0.788	0.783	0.780	0.804	0.799	0.801
2. Social Security Wealth SSW	--	0.370	0.344	0.363	0.356	0.361	0.352	0.359
3. Retirement Wealth RW	--	0.485	0.493	0.514	0.501	0.528	0.519	0.530
4. Net Worth (NW)	0.799	0.828	0.826	0.834	0.834	0.866	0.869	0.869
5. Private Augmented Wealth (PAW)	--	0.793	0.796	0.805	0.804	0.833	0.839	0.840
6. Augmented Wealth (AW)	--	0.663	0.661	0.684	0.675	0.693	0.699	0.710
B. Ages 46 and under								
1. Pension Wealth (PW)	--	0.810	0.801	0.810	0.805	0.819	0.807	0.808
2. Social Security Wealth SSW	--	0.306	0.320	0.327	0.314	0.335	0.334	0.342
3. Retirement Wealth RW	--	0.405	0.430	0.440	0.413	0.438	0.427	0.439
4. Net Worth (NW)	0.797	0.887	0.859	0.880	0.880	0.972	0.951	0.951
5. Private Augmented Wealth (PAW)	--	0.851	0.830	0.850	0.852	0.929	0.914	0.916
6. Augmented Wealth (AW)	--	0.642	0.616	0.636	0.619	0.631	0.638	0.656
C. Ages 47-64								
1. Pension Wealth (PW)	0.666	0.715	0.724	0.716	0.707	0.748	0.752	0.754
2. Social Security Wealth SSW	0.297	0.314	0.297	0.305	0.299	0.300	0.306	0.312
3. Retirement Wealth RW	0.378	0.454	0.464	0.470	0.454	0.496	0.484	0.495
4. Net Worth (NW)	0.761	0.775	0.798	0.795	0.795	0.825	0.841	0.841
5. Private Augmented Wealth (PAW)	0.688	0.721	0.756	0.758	0.755	0.787	0.810	0.811
6. Augmented Wealth (AW)	0.574	0.619	0.637	0.650	0.639	0.665	0.682	0.692
D. Ages 65 and over								
1. Pension Wealth (PW)	0.638	0.796	0.754	0.755	0.753	0.758	0.752	0.755
2. Social Security Wealth SSW	0.412	0.463	0.356	0.415	0.421	0.385	0.360	0.365
3. Retirement Wealth RW	0.378	0.529	0.486	0.535	0.537	0.516	0.524	0.533
4. Net Worth (NW)	0.778	0.778	0.762	0.784	0.784	0.781	0.807	0.807
5. Private Augmented Wealth (PAW)	0.708	0.738	0.724	0.748	0.746	0.737	0.764	0.766
6. Augmented Wealth (AW)	0.599	0.652	0.626	0.665	0.660	0.635	0.662	0.670

	Old series			New series			Combined series	
II. Change	1983-89	1989-01	2001-07	2007-10	2010-19	2019-20	1983-2019	1989-2019

A. All Households								
1. Pension Wealth (PW)	--	-0.011	-0.005	0.024	-0.005	0.002	--	0.002
2. Social Security Wealth SSW	--	-0.026	0.019	0.005	-0.009	0.008	--	-0.011
3. Retirement Wealth RW	--	0.009	0.021	0.027	-0.010	0.012	--	0.047
4. Net Worth (NW)	0.029	-0.001	0.008	0.032	0.003	0.000	0.070	0.041
5. Private Augmented Wealth (PAW)	--	0.003	0.009	0.029	0.006	0.001	--	0.047
6. Augmented Wealth (AW)	--	-0.002	0.023	0.018	0.007	0.010	--	0.046
B. Ages 46 and under								
1. Pension Wealth (PW)	--	-0.009	0.009	0.014	-0.012	0.001	--	0.003
2. Social Security Wealth SSW	--	0.013	0.008	0.020	0.000	0.008	--	0.041
3. Retirement Wealth RW	--	0.024	0.010	0.025	-0.012	0.013	--	0.048
4. Net Worth (NW)	0.089	-0.027	0.021	0.092	-0.021	0.000	0.154	0.064
5. Private Augmented Wealth (PAW)	--	-0.021	0.019	0.077	-0.015	0.002	--	0.061
6. Augmented Wealth (AW)	--	-0.025	0.020	0.012	0.007	0.018	--	0.014
C. Ages 47-64								
1. Pension Wealth (PW)	0.049	0.010	-0.008	0.042	0.004	0.002	0.096	0.047
2. Social Security Wealth SSW	0.017	-0.017	0.008	0.001	0.006	0.006	0.015	-0.002
3. Retirement Wealth RW	0.075	0.010	0.007	0.042	-0.011	0.011	0.123	0.047
4. Net Worth (NW)	0.013	0.024	-0.003	0.030	0.016	0.000	0.080	0.067
5. Private Augmented Wealth (PAW)	0.033	0.034	0.003	0.032	0.023	0.001	0.125	0.092
6. Augmented Wealth (AW)	0.045	0.018	0.013	0.025	0.018	0.009	0.119	0.074
D. Ages 65 and over								
1. Pension Wealth (PW)	0.158	-0.042	0.001	0.005	-0.005	0.003	0.116	-0.042
2. Social Security Wealth SSW	0.051	-0.108	0.059	-0.036	-0.025	0.005	-0.058	-0.109
3. Retirement Wealth RW	0.151	-0.043	0.049	-0.020	0.007	0.009	0.144	-0.007
4. Net Worth (NW)	0.000	-0.016	0.022	-0.003	0.026	0.000	0.029	0.029
5. Private Augmented Wealth (PAW)	0.029	-0.013	0.024	-0.009	0.027	0.002	0.058	0.029
6. Augmented Wealth (AW)	0.053	-0.026	0.039	-0.026	0.028	0.008	0.068	0.015

Note: author's computations from the 1983, 1989, 2001, 2007, 2010, and 2019 SCF.
The "old series" is based on mortality rates for whites and blacks. The new series is based on mortality rates for non-Hispanic whites, non-Hispanic blacks, and Hispanics. The "combined series" uses the change for 1983 (or 1989) - 2007 based on the old series and the change for 2007-2019 based on the new series.
Households are classified into age groups by the age of the head of household. Key:
Retirement Wealth RW = PW + SSW
Privately Accumulated Wealth PAW = NW + DBW
Augmented Wealth AW = NW+DBW+SSW

Appendix Table 6. The Composition of Augmented Wealth, 1983-2019
(Percentage)
[4/10/23 version]

Component	Old series 1983	Old series 1989	Old series 2001	Old series 2007	New series 2007	New series 2010	New series 2019	2020 Mortality Rates	Percentage Point Change 2019-20	Combined Series 1983-2019	Combined Series 1989-2019
A. All Households											
1. Non-Pension Net Worth (NWX)	--	62.6	57.3	60.2	59.0	54.7	56.3	57.3	1.0	--	-5.1
2. DC Wealth (DCW)	--	2.2	9.4	10.1	9.9	12.2	12.2	12.4	0.2	--	10.2
3. DB Wealth (DBW)	--	11.8	8.7	8.0	8.1	8.6	7.9	7.8	-0.1	--	-3.9
4. Social Security Wealth SSW	--	23.4	24.5	21.7	23.0	24.2	23.5	22.5	-1.1	--	-1.2
Augmented Wealth (AW)	--	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	--	-0.1
Memo: Ratio of Pension Wealth PW to Retirement Wealth RW	--	37.5	42.5	45.5	43.8	46.1	46.2	47.4	1.2	--	10.3
B. Ages 46 and under											
1. Non-Pension Net Worth (NWX)	--	56.0	48.6	49.7	48.6	40.6	44.2	45.6	1.4	--	-10.6
2. DC Wealth (DCW)	--	3.2	9.3	8.5	8.3	10.7	10.3	10.6	0.3	--	7.3
3. DB Wealth (DBW)	--	8.7	5.7	6.8	5.5	5.7	4.7	4.7	0.0	--	-2.7
4. Social Security Wealth SSW	--	32.1	36.3	34.9	37.6	43.4	40.9	39.1	-1.8	--	6.1
Augmented Wealth (AW)	--	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	--	0.0
Memo: Ratio of Pension Wealth PW to Retirement Wealth RW	--	27.0	29.3	30.5	26.9	27.5	26.8	28.1	1.4	--	3.4
C. Ages 47-64											
1. Non-Pension Net Worth (NWX)	62.3	63.8	57.9	60.3	59.2	56.5	58.7	59.5	0.8	-2.6	-4.0
2. DC Wealth (DCW)	1.4	2.9	11.1	12.1	11.8	14.1	13.7	13.9	0.2	12.5	11.0
3. DB Wealth (DBW)	13.2	14.0	9.7	8.2	8.5	8.6	6.6	6.5	-0.1	-6.8	-7.7
4. Social Security Wealth SSW	23.2	19.3	21.3	19.4	20.5	20.7	21.1	20.2	-0.9	-3.1	0.7
Augmented Wealth (AW)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
Memo: Ratio of Pension Wealth PW to Retirement Wealth RW	38.7	46.6	49.5	51.1	49.7	52.4	48.9	50.2	1.3	11.6	3.7
D. Ages 65 and over											
1. Non-Pension Net Worth (NWX)	66.6	68.0	64.6	67.7	66.4	59.7	59.2	60.1	0.9	-6.1	-7.5
2. DC Wealth (DCW)	0.3	0.3	6.9	7.9	7.7	10.0	11.5	11.6	0.2	11.3	11.3
3. DB Wealth (DBW)	11.4	12.4	9.8	8.5	9.3	10.0	11.0	10.7	-0.3	-1.2	-2.2
4. Social Security Wealth SSW	21.7	19.2	18.8	15.9	16.5	19.4	18.3	17.6	-0.7	-4.0	-1.6
Augmented Wealth (AW)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
Memo: Ratio of Pension Wealth PW to Retirement Wealth RW	35.1	39.9	46.9	50.9	50.8	50.9	55.1	55.9	0.8	20.1	15.3

Note: author's computations from the 1983, 1989, 2001, 2007, 2010, and 2019 SCF.
The "old series" is based on mortality rates for whites and blacks. The new series is based on mortality rates for non-Hispanic whites, non-Hispanic blacks, and Hispanics. The "combined series" uses the change for 1983 (or 1989) - 2007 based on the old series and the change for 2007-2019 based on the new series.
Households are classified into age groups by the age of the head of household.
See notes to Table 5 for the key.