Simulating How Large Policy Proposals Affect the Black-White Wealth Gap

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Abstract

The wealth gap between African-American and White households has persisted for decades, prompting policymakers and experts to suggest several large-scale interventions. We evaluate the possible impact of five such proposals on the Black-White wealth gap. These interventions include debt-free college, baby bonds, civil rights enforcement in housing markets, credit market regulations enforcement, and a national retirement savings plan. Using simulations anchored in data and the existing literature, we conclude that baby bonds would have the single largest effect. But a large wealth gap would remain, even if all five proposals were promptly enacted. Only targeted cash or liquid asset transfers to African-Americans can overcome the persistent wealth difference with White households.

Keywords Inequality · Race · Discrimination · Wealth

Introduction

The pandemic of 2020 has highlighted the importance of wealth for families' financial security and longer-term economic opportunity. Sufficient wealth allows for families to purchase a home or put their children through college. It also provides protection to weather a financial emergency such as a family member falling severely ill, becoming unemployed, or suddenly taking on additional caregiving responsibilities.. Many families faced all of these events at the same time when the novel coronavirus arrived in March 2020, resulting in a

both a massive public health challenge and a sharp economic downturn. The pandemic highlighted the importance of easily accessible cash as most Americans were not prepared or had little time to prepare for businesses and schools to close.

Yet wealth is highly unequally distributed by race. Many African-American families have little or no wealth and thus have fewer opportunities for economic mobility and are financially more vulnerable than White families. The pandemic of 2020 illustrated these glaring racial wealth differences in sharp relief. African-Americans faced more health emergencies (Maxwell 2020; Weller 2020a), much higher unemployment rates than Whites (Ajilore 2020a; Weller 2020b), and less reliable tools for children's remote learning—Internet and electronic device availability (Weller 2020). Yet, they had much less wealth to handle these additional financial needs, quickly exacerbating the economic divide between Black and White households.

The Black-White wealth gap is nothing new. It has persisted for decades. The pandemic just starkly showed why it mattered for people's lives and livelihoods. There is no sign of this wealth inequality dissipating. On the contrary, Black families have fallen behind White families with respect to their wealth in the years after the Great Recession of 2007 to 2009. Without large-scale policy interventions, these racial wealth disparities will likely persist for at least another 200 years (Asante-Muhammad et al. 2016).

Experts and policymakers have suggested a range of policies to address this persistent wealth inequality. These proposals

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include making college debt free, providing children with some start-up capital known as baby bonds, enforcing civil rights legislation to eliminate housing market discrimination, establishing new retirement savings options to give all workers the opportunity to save in low-cost and low-risk accounts and enforcing financial market regulations to eliminate asset and credit market discrimination. All of these approaches will disproportionately assist African-Americans in building wealth.

However, the question is how effective are each of these policies on reducing or even eliminating the Black-White wealth gap. We built a simulation model to evaluate five policy proposals to reduce or eliminate the Black-White wealth gap.

Our results provide several key findings. First, all policies would reduce the Black-White wealth gap, although to varying degrees. Second, the “baby bonds” program individually has the largest effect while strict financial market regulation enforcements have the smallest impact. Third, even if all five proposals are immediately and consistently implemented, about half of the expected Black-White wealth gap will remain. In fact, with all five proposals in place, the simulation finds that Black wealth would not reach the amount White wealth started at 40 years earlier. Overall, these results suggest that only large-scale, immediate wealth transfers to Black families that go beyond the proposals simulated in this paper have the potential to eliminate the Black-White wealth gap. And, such wealth transfers will need to be coupled with systematic reforms. Equalizing legislation and regulation will need to protect African-American wealth to the same degree as White wealth and allow Black families to build wealth at the same rate over generations as is the case for White families.

The rest of the paper is organized as follows. We summarize the previous literature and describe five wealth-equalizing proposals in “[Literature Review](#).” “[Assumptions and Simulation Methodology](#)” describes our assumptions and ¹simulation model. We present our main results and sensitivity analyses in “[Simulation Results](#).” “[Discussion](#)” offers a discussion of our results and “[Conclusion](#)” concludes.

Literature Review

Wealth serves a number of purposes for families. It eases the transition between jobs and neighborhoods. It provides a buffer in cases of unforeseen events such as a layoff and health emergency. It can replace part of a family’s income during retirement. Families can also use wealth to invest in their own and their children’s future through home purchases and education. Wealth offers some degree of financial security and independence for families that goes beyond the financial importance of current income.

Wealth is highly unequally distributed, however, especially by race. African-Americans own only a fraction of the wealth of White households and that gap has persisted for decades (Conley and Glauber 2008; Oliver and Shapiro 2009; Conley

2009; Muñoz et al. 2015; De La Cruz-Viesca et al. 2016; Kijakazi et al. 2016; Hankset al. 2018; Weller and Hanks, 2018). The median non-retired White household held \$142,180 in wealth—almost 10 times more than the median non-retired Black household’s wealth of \$13,460 in 2016 (Table 1) (Hanks et al. 2018; Weller and Hanks, 2018).

The wealth gap at the median overlooks the wealth disparity among somewhat wealthier households. In that sense, average wealth offers additional insights on the aggregate wealth differences between the two groups. In 2016, the average White working household held close to \$935,584, or \$833,107 more than the average Black household in a comparable situation, which owned just \$102,477 then (Table 1). The average wealth gap is five times as large—in absolute terms—than is the case at the median.

The racial wealth gap persists, even among subpopulations, broken down by educational attainment, marital status, age, and income level (Hamilton et al. 2015; Hanks et al. 2018; Weller and Hanks, 2018). In fact, college-educated Black households have 30% less wealth at the median than non-college-educated White households (Hanks et al. 2018). And the wealth gap widens by age, as we show below. Moreover, the data show that the wealth gap is especially large among single women, a population that was hit hard by the pandemic (Frye 2020). In 2016, for example, single Black women not only had less wealth than single Black men, but their wealth gap with White women was larger than for men. The median wealth of single Black women was 8.7% of the median wealth of single White women in 2016. In comparison, married Black couples had 18.9% of the median wealth of married White couples and single Black men had 17.9% of the median wealth of single White men then.¹ The Black-white wealth gap tends to be larger among those subpopulations that are already struggling more.

The racial wealth gap is not a new phenomenon (Dettling et al. 2017; Hanks et al. 2018; Weller and Hanks, 2018). Since 1989, the median wealth held by Black adults between the ages of 25 and 65 never exceeded 19% of the median wealth of similarly situated White adults (Hanks et al. 2018; Weller and Hanks, 2018). Average Black wealth never exceeded 22% of average White wealth during this period (Hanks et al. 2018; Weller and Hanks, 2018).

Evidence also suggests that the racial wealth gap widened in the wake of the Great Recession. At the median, Black household wealth declined by 48% from 2007 to 2016, compared to 25% among White households (Hanks et al. 2018). And average Black household wealth declined by approximately one-third during that period, compared to a 15% wealth increase for White households (Hanks et al. 2018).

¹ Sample includes non-retired households 25 years old and older. Authors’ calculations based on the Fed (2017).

Table 1 Wealth inequality by race among non-retirees older than 25 years, 1989 to 2016

Year	Median wealth (without DB pension wealth)		Mean wealth (without DB pension wealth)		Mean wealth (with DB pension wealth)		Share with no or negative wealth		Mean wealth to income	
	White	Black	White	Black	White	Black	White	Black	White	Black
1989	\$129,771	\$7090	\$436,935	\$81,571	\$519,863	\$143,337	7.1%	32.2%	440.8%	204.8%
1992	\$106,494	\$13,417	\$374,423	\$80,533	\$472,287	\$151,335	7.1%	21.2%	444.4%	184.9%
1995	\$112,752	\$19,622	\$392,000	\$72,418	\$492,328	\$142,239	6.7%	23.4%	459.0%	182.3%
1998	\$129,014	\$24,198	\$499,816	\$90,031	\$619,435	\$145,450	8.2%	19.3%	505.9%	191.9%
2001	\$162,447	\$28,316	\$652,336	\$89,671	\$785,182	\$156,518	6.3%	17.7%	534.2%	164.9%
2004	\$169,338	\$24,927	\$726,621	\$136,741	\$861,704	\$212,136	6.9%	17.5%	622.7%	252.9%
2007	\$188,756	\$25,841	\$815,063	\$154,557	\$960,283	\$257,208	7.6%	20.8%	639.0%	260.7%
2010	\$126,063	\$17,133	\$738,733	\$98,184	\$901,900	\$188,279	11.6%	22.7%	636.7%	195.7%
2013	\$124,258	\$10,115	\$732,475	\$101,851	\$898,024	\$201,372	10.0%	28.7%	592.4%	206.5%
2016	\$142,180	\$13,460	\$935,584	\$102,477	\$1,094,143	\$203,250	10.6%	25.8%	666.6%	176.7%

Notes: Authors' calculations based on Board of Governors, Federal Reserve System 2017. Survey of Consumer Finances. Washington, DC: Fed. Dollar figures are in 2016 dollars. Nominal dollars deflated by Consumer Price Index for Urban Consumers Research Series (CPI-U-RS). Sample includes all households 25 years old and older, who indicate that they are not retired. Median wealth with imputed DB pension is not included in this table since the median DB pension wealth is close to zero and thus changes the numbers only slightly

Key Fault Lines of Black-White Wealth Gap The racial wealth gap between Black and White households follows several key fault lines. First, a large share of existing wealth is passed on to future generations. Feiveson and Sabelhaus (2018) show how inheritance and in vivo gifts contribute to intergenerational wealth transfers, establishing a key mechanism of persistent wealth inequality by race. White households are more likely to receive an inheritance, and the inheritance they receive is higher, on average, than the inheritance received by their Black counterparts (Dettling et al. 2017). Specifically, White families are five times more likely than Black families to receive large gifts and inheritances, and the average value of a White family's inheritance is four times the average value of a Black family's inheritance (McKernan et al. 2011; Thompson and Suarez 2015). For instance, 22.9% of White households with a head of household age 30 to 59 in 2015 received an inheritance, and the average inheritance was \$236,495 (Thompson and Suarez 2015). Furthermore, 18.8% of these households anticipated receiving an additional inheritance at some point in the future. In contrast, just 10.6% of Black heads of household in the same age range in 2015 received an inheritance, and the average inheritance was just \$55,207 (Thompson and Suarez 2015). Additionally, only 5.9% of African-American households anticipated receiving an additional inheritance at some point in the future (McKernan et al. 2011). White families also receive approximately \$5000 more than Black families in large gifts and inheritances as measured over a two-year period (McKernan et al. 2011). These average differences add up to substantial amounts over time. Between 1997 and 2007, the accumulative effect of large gifts and inheritances accounted for an estimated 12% of the difference in wealth between White and Black families (McKernan et al. 2011).

The importance of intergenerational wealth transfers in terms of wealth inequality has increased over time. Many young Americans—especially people of color—have struggled to gain a financial foothold due to wage stagnation, high debt, and limited assets (Choi et al. 2018; Bialik and Fry 2019). These realities limit wealth-building opportunities and exacerbate inequality.

Second, persistent housing segregation and mortgage market discrimination have prevented millions of Black families from building home equity through home ownership (Bayer et al. 2017; Munnell et al. 1996; Ladd 1998; Perry et al. 2018; Wachter and Megbolugbe 2010; Rothstein 2018; Solomon et al. 2019). In 2016, only 41.0% of Black households owned their own house, while the White homeownership rate among working-age households was 71.8% then (Hanks, Solomon and Weller, 2018).

Lower homeownership rates follow from persistent housing discrimination. Almost half—45%—of African Americans reported experiencing discrimination when trying to rent or buy housing in 2016, compared with just 5% of White Americans (NPR, Robert Wood Johnson Foundation, and Harvard T.H. Chan School of Public Health 2017).

African-Americans build home equity more slowly than Whites. They regularly pay more for a house than Whites do (Bayer et al. 2017), following a long history of mortgage market discrimination. The average home equity of Black homeowners was \$77,778 in 2016, compared to \$206,112 for White homeowners who were at least 25 years old and not retired.² Importantly, persistent obstacles in housing and mortgage markets reduce the value of Black homeowners' home equity by an

² Authors' calculations based on Fed (2017).

average of \$48,000 in 2016 due to racial bias alone (Perry et al. 2018).

Third, labor market segregation and chronic underfunding of civil rights agencies have also largely restricted Black workers to occupations with lower wages and fewer benefits than their White counterparts (Spalter-Roth and Lowenthal 2005; Borowczyk-Martins et al. 2017; Copeland 2014). Black workers are a lot less likely to work in jobs that offer retirement benefits either in the form of 401(k) plan or a traditional defined benefit pension than is the case for White workers (Copeland 2014; Weller and Hanks 2018). Moreover, lower earnings for African-Americans provide people with fewer resources and fewer tax incentives to save for retirement (Boddupalli and Rueben 2020; Weller and Ghilarducci 2015), contributing to smaller retirement account balances (Hanks et al. 2018).

Fourth, Black workers have worse labor market outcomes such as lower wages, fewer benefits, and greater job instability not only due to discrimination but also in part due to less access to affordable education. This makes it less likely that Black students will attend college than White students. In aggregate, total student loan debt exceeded \$1.5 trillion in 2019 (Miller et al. 2019). And when they do, they will end up with more debt. A 2015 Demos analysis found that 81% of Black graduates from publicly funded colleges and universities borrowed to finance their educations, compared with just 63% of White graduates (Huelsman 2015). A study by the American Council on Education finds that 86% of Black bachelor's degree recipients in 2016 had borrowed to finance their educations, compared with just 70% of White recipients (Espinosa et al. 2019). African-American college graduates then have a harder time to build wealth at the same rate as White college graduates since they start their careers deeper in debt.

Fifth, many African-American borrowers still face substantial obstacles to affordable financial products. Black families are more likely to have higher-cost debt such as car and student loans than mortgages and home equity lines because they are less likely to own their own home (National Consumer Law Center 2015). Moreover, African-Americans have lower paid and less stable jobs as well as fewer emergency savings (Ajilore 2020b; Weller 2019, 2020; Hanks et al. 2018), which means that they will need to borrow more on credit cards, for example, to address short-term labor income fluctuations. When African-American families take out such consumer credit, they tend to be charged higher interest rates than White borrowers (Garcia 2010; Holmes 2016; Weller 2009). For instance, they face statistical discrimination, whereby past financial market discrimination translates into worse evaluations in applications for new debt (Pope and Sydnor 2011).

The literature identifies several key channels that disadvantage African-American families in building wealth. These include intergenerational wealth transfers through inheritances and in vivo gifts, retirement savings, student loan debt, and financial market discrimination.

Policy Proposals to Address Black-White Wealth Inequality A number of key proposals exist to address each of these channels towards wealth inequality. First, Hamilton and Darity (2010) propose so-called baby bonds, whereby each child would receive a fixed dollar amount each year until they reach age 18. This annual transfer could be capped by parents' wealth (Hamilton and Darity 2010) or parents' income (CFRB 2019). A national baby bonds program would deposit an initial sum of money into a low-risk savings account for each newborn baby in the USA (Hamilton and Darity 2010). The US Department of the Treasury would manage these accounts and make additional progressive contributions each year based on parental wealth (Hamilton and Darity 2010). Minors whose parents or guardians have little or no wealth would receive greater contributions than minors whose parents or guardians have average or above-average wealth. Beneficiaries would gain access to their accounts at age 18 and could use these assets to help cover housing, education, or transportation expenses, among other things (Hamilton and Darity 2010).

Baby bonds are meant to at least in part address the fact that many White families receive wealth transfers from prior generations, while fewer Black families do. Families would eventually end up with more wealth earlier in their careers than is currently the case and because African-Americans tend to have lower incomes than White Americans, this wealth transfer should shrink the racial wealth gap.

Second, state-sponsored retirement plans could supplement existing employer-sponsored retirement savings benefits. Such state-sponsored plans would offer workers, who do not have access to a retirement benefit at work, the option to regularly save for retirement in low-cost, low-risk investments. Madland et al. (2016) specifically propose to establish such a retirement savings plan at the national level. Employees would be automatically enrolled in this new plan but could opt-out any time; their contributions relative to earnings would increase over time and their investments would be secure and relatively low risk. Because Black workers tend to have less access to retirement benefits at work than White workers do, this proposal should disproportionately boost retirement savings for African-Americans.

Third, several presidential candidates during the 2019/2020 presidential election cycle suggested canceling student loan debt and making college debt-free (Warren 2020; Sanders 2020; Biden 2020). Since Black students are more likely to borrow for their education and since Black graduates' debt balances tend to be greater than is the case for White Americans, this proposal should automatically shrink the Black-White wealth gap.

Fourth, a range of proposals exist to fully enforce civil rights statutes prohibiting housing discrimination, and strengthen the oversight and enforcement of financial institutions to eliminate systematic differences in mortgage markets

(US Department of Housing and Urban Development 2012). African-Americans would pay less for their house and their mortgage. More equitable access to housing and more equal treatment in housing markets should then lower the cost of buying and owning a house for African-Americans and allow them to build home equity more quickly.

Fifth, the Consumer Financial Protection Bureau (CFPB) is charged with protecting consumers from fraud, discrimination, and abuse in the US financial marketplace. In the 8 years since its inception, the agency has targeted discriminatory lending in the auto loan, home loan, and credit card industries and cracked down on payday lending companies (Valenti and Solomon 2017). However, the Trump administration and congressional Republicans have engaged in repeated efforts to weaken the CFPB, jeopardizing the financial well-being of many Americans, especially people of color (Valenti and Solomon 2017). Strengthening the CFPB would involve expanding its resources, capacity, and authority to combat malfeasance in the financial marketplace.

Greater financial regulatory oversight should reduce the costs associated with financial products, most notably consumer credit, and thus increase the rate of return on wealth for families. Since African-Americans are more likely to face discriminatory financial service practices, this approach should especially benefit Black families' wealth.

All five approaches—baby bonds, national retirement savings, canceling student loan debt and making college debt-free, elimination of housing and mortgage disparities, as well as ending financial market discrimination—could shrink the Black-White wealth gaps. It is unclear, though, how effective each of these policies would be in accomplishing this goal since both Black and White families would benefit to some degree from all of these proposals. We use a set of reasonable assumptions to model the impact of each of these proposals in isolation and combination on the Black-White wealth gap.

Assumptions and Simulation Methodology

We create a forward-looking exercise to simulate the effects of these five distinct interventions on the Black-White wealth gap over the next 40 years. Our simulations show what would happen over the coming generation if the relevant policies were enacted immediately. We choose a forward-looking approach since establishing a counterfactual for past wealth trends is impossible to accomplish as the relevant data do not exist on a consistent basis. For example, workplace retirement savings accounts did not start to take shape until the early 1980s and thus have only recently reached a relatively large and stable population share.

Our simulations use two hypothetical households: one Black and one White in 2020. Each household consists of

two 25-year-old individuals of the same race. One of the two members of each household earns an annual income based on a 40-h workweek. The other does not earn an income. These assumptions reflect the typical characteristics of married couples, which comprise the majority of households around the age of 65 years. We thus implicitly assume no further demographic changes towards more single households over the coming decades. Our simulations thus address differences by age and education among married couples, but they do not account for large gaps by marital status, especially among single women.

Based on our analysis of data from the 2016 Survey of Consumer Finances, the share of dual-earner couples is slightly higher than 50% among younger Americans and drops to less than 50% among Americans in their late 50s and early 60s.³ Dual-earner status does change as educational attainment increases; the share of dual-earner couples with a college degree in recent years was 55%, compared with 48% for people without a college degree. However, these slight changes are exceedingly difficult to model. Therefore, we tested two different models to determine whether the relative racial wealth gap between two single-earner households would significantly differ from the relative gap between two dual-earner households. These models did not produce significantly different conclusions. We thus restrict our simulations to two single-earner couples.

We estimate each household's wealth by the time people reach retirement at age 65 in 2060. This way we capture the full effect of all simulated policies. We highlight two data points resulting from our simulations. First, we calculate the percentage, by which each proposal individually or in combination with others shrinks the wealth gap that otherwise would have persisted in 2060. Second, we calculate the residual amount of the remaining wealth gap in 2060 after proposals are enacted. We specifically transform this dollar amount into the net present value in 2020. That is, the amount of wealth that would have to be transferred to the hypothetical Black household in 2020 to ensure that together with expected earnings on that wealth the Black-White wealth gap will be completely closed by 2060. This is the amount of cash that Black families on average would need to receive at age 25 to ensure that no further wealth gap between Black and White families exist when they retire.

Taking a snapshot of total wealth earlier than during the householders' mid-60s would bias the simulations towards interventions that have their largest effects early in people's lives, such as baby bonds. Put differently, evaluating wealth at the end of people's careers allows us to account for the full effect of all five proposals on the Black-White wealth gap.

³ Authors' calculations based on Fed (2017).

Baseline Estimates and Assumptions

We use population-weighted averages to establish baseline earnings, college completion and savings rates, rates of return, and inheritances for the two hypothetical households in our Black-White wealth gap simulations.

We create a baseline wealth calculation as follows. We first establish an age-earnings profile for the hypothetical Black and White households. Each hypothetical household's age earnings profile reflects the population average earnings profile. We thus weight average of earnings for college and non-college graduate by each subpopulation's—Black or White—shares of people with college degrees and those without one, as detailed further below. Next, we assume that people save out of their current earnings during their careers. Those savings are invested at an assumed rate of return that compounds throughout people's careers until they reach age 65. The annual savings and capital earnings are added to a household's prior year's wealth, which starts out higher for White Americans than African-Americans due to inherited wealth. As a result, we arrive at a simulated amount of wealth upon retirement at age 65 that amounts to the cumulative effect of inherited wealth, annual savings, and annual capital earnings.

Our simulation methodology, described below, varies several of these input variables in line with a range of policy proposals.

Age-Earnings Profiles Earnings for 25-year-old workers with and without a college degree are based on the 2013–2017 American Community Survey 5-year estimates, which report that the typical incomes for a 25- to 29-year-old worker with and without a college degree were \$42,000 and \$21,000 during that period, respectively.⁴ To avoid providing a false sense of accuracy, we round these estimates to \$45,000 for households with college degrees in 2020 and to \$25,000 for those without one. We average these earnings by college degree by each subpopulation's share of people with college degrees, as detailed below, to arrive at an age-earnings profile for Black and White families. We further assume that nominal earnings will increase by 1% per year accounting for economy wide productivity growth, which approximates the experience over the past four decades—our simulation horizon. We further let future earnings increase at a rate of 2 % of inflation each year over the next 40 years.⁵

College Completion Rates We base average college completion rates on estimates from the National Center for Education

Statistics, which reports that 22.8% of 25- to 29-year-old Black Americans and 42.1% of 25- to 29-year-old White Americans have a bachelor's degree or higher (NCES 2017). We again round these estimates to 25% for African-Americans and to 45% for White among 25 years olds in 2020.

We use these college completion rates to arrive at weighted age-earnings profiles. We assume that 25% of African-Americans have earnings of people with a college degree, while 75% have wages of people without a college degree. Similarly, the White age-earnings profile consists of college-graduate earnings to 45% and non-college graduates' to 55%.

Savings Rates We assume a baseline savings rate of 4% for workers without a college degree and 8% for workers with a college degree. We also assume that there are no differences in saving rates between Black and White families. The average saving rate difference by education is based on the assumption that workers with a college degree have a higher earnings profile than workers without a college degree, allowing them to save a greater portion of their income over time. The assumption that there is no difference in saving rates by race reflects the literature (Dal Borgo 2019; Gittleman and Wolff 2004) and the data. Based on SCF data, Black families are as likely or even more likely to save regular or irregular amounts as White families in each income quintile. For example, from 2010 to 2016, 70% of both Black and White families in the top income quintile said they saved regular or irregular amounts, whereas the share of savers was five to nine percentage points higher among Black families in lower income quintiles. In addition, we chose savings rates close to national average saving rates, which, together with our other assumptions, also results in a total Black-White wealth gap at age 65 without policy interventions resembles that observed in the SCF data for 2016.

Student Loan Borrowing Rates In the policy simulations described below, households' saving rates can change with attaining a college degree and relatedly with the elimination of student loan debt. The change in the saving rate for college graduates will be greater if there are more college graduates with student loan debt. We base average student borrowing incidence rates on Huelsman (2015) and Espinosa et al. (2019). Huelsman (2015) found that 81% of Black graduates from publicly funded colleges and universities borrowed to finance their educations, compared with just 63% of White graduates. Moreover, Espinosa et al. (2019) find that 86% of Black bachelor's degree recipients in 2016 had borrowed to finance their educations, compared with just 70% of White recipients. We round these estimates to 80% for African-Americans and to 60% for White Americans at age 25 in 2020 in our simulations.

⁴ Authors' analysis of Ruggles et al. (2019)

⁵ This assumption mirrors typical earnings growth rates over long periods in US data. We use an average earnings growth rate to simplify the calculations, even though age earnings are hump shaped with faster earnings growth earlier in people's careers and slower growth rates later in life. The exact shape of the age-earnings profile has little bearing on the simulation results.

Rates of Return We assume a baseline real rate of return of 2.5% for Black households and 3% for White households. The White rate of return is equal to the long-term real risk-free rate of return. We thus assume that excess equity returns that go beyond the higher risk associated with stock market investments will no longer persist in the future. The 50 basis-point gap in rate of return between Black and White savers is based on several studies demonstrating that Black and White borrowers and investors experience different interest rates, even after controlling for various protective factors (Bartlett et al. 2019; DeSilver and Bialik 2017; Dietrich et al. 2018).

Large Gifts and Inheritances For the purpose of the simulation, we assume a baseline amount of \$200,000 in large financial gifts and other forms of familial inheritance for the simulation's two-person White household and a baseline of \$0 for the two-person Black household. This figure is designed to capture skewed inheritances, including the acquisition of property from past generations, such as a house that is owned outright; formal and informal gifts that may not be considered a traditional inheritance, such as familial assistance with rent or a down payment on a house; and benefits from social networks and other resources, to which White households have disproportionate access. It is difficult to state with precision the exact cumulative difference in all of this assistance between Black and White American households. The average difference of \$200,000 at the start of the simulation period in our simulations creates a wealth difference that, in 2020 dollars, is roughly equal to the observed wealth difference among 65 years old after 40 years of capital earnings in the SCF data.

Moreover, the SCF data show that a gap of \$200,000 in inheritances is close to the actual differences of average gifts and inheritances that families have received or expect to receive. For the years from 2010 to 2019, White households between the ages of 55 and 64 years old, the age group best representing the end point of our simulation, had received gifts and inheritances equal to \$101,354 (in 2019 dollars). In comparison, Black households had received \$12,623 at that time. Furthermore, older White households expected to get an additional \$75,214 as gifts and inheritances, while Black households expected \$2941. This represents a total gap of \$161,004 in received and expected gifts and inheritances and does not count additional intergenerational wealth transfers such as access to social networks.

The remaining amount between the actual observed wealth transfer differences and our assumed amount of \$200,000 reflects intangible yet valuable intergenerational transfers. These include all forms of social capital such as access to social and professional networks, experience with college applications, and living and working in a less discriminatory institutional setting. Given how valuable some of these additional benefits can be that White families can provide to their children over a lifetime, our average assumed starting wealth

difference of \$200,000 is likely an understatement of the actual advantages that White families have.

We use the above-discussed assumptions to model baseline wealth for married households turning 25 years old in 2020 when they retire 40 years later in 2060. We calibrate the baseline wealth for Black and White households, such that the resulting gap resembles the average wealth gap between Black and White households aged 55 to 64 years old, when we exclude the wealthiest 10% of households in each group. Our calculations thus simulate changes to wealth that approximate average wealth rather than median wealth. While median wealth often reflects the experiences of a typical household, the past few years after the Great Recession and during the onset of the COVID-19 pandemic have highlighted the need for and lack of adequate wealth among not only less wealthy but also middle-class Black families.

Our simulations focus on total, marketable wealth. We do not account for imputed DB pension wealth. All of the major policy proposals to close the Black-White wealth gap concentrate on individual and transferable wealth, which naturally excludes most defined benefit (DB) pensions. Moreover, few households—Black or White—had a DB pension in a current job in 2016 (Sabelhaus and Henriques Volz 2019). Proposals to substantially expand DB pensions would thus have a large effect on both Black and White wealth and consequently do little to shrink the racial wealth gap. Non-DB pension wealth consequently provides a more appropriate policy target.

Modeling Five Key Policy Interventions

We express all of our absolute wealth data in 2020 dollars. To do so, we inflate data used as inputs in our simulations, derived from earlier data sources, to 2020 using the assumed inflation rates and rates of return, discussed above.

We focus here on five policy interventions designed to shrink the Black-White wealth gap. These include canceling student loan debt and making college debt free; providing seed capital for America's youth in the form of a national baby bonds program; fully enforcing existing civil rights statutes prohibiting housing discrimination; bolstering retirement incomes by establishing a national savings plan; and combatting predatory lending by strengthening the Consumer Financial Protection Bureau.

Forgive Student Loan Debt and Make College Debt Free The first policy proposal would cancel all student loan debt and offer comprehensive federal tuition subsidies based on a household's ability to finance higher education. We estimate that enacting this proposal will have two effects related to the wealth gap. First, it will increase the saving rates of otherwise indebted college attendees, and second, it will increase college graduation rates.

We specifically assume that student loan cancellation will cause otherwise indebted college attendees to transform much of their now-canceled student loan payments into additional savings over two decades, from age 25 to age 44. White Americans are far more likely to attend college, and thus are more likely to hold student loan debt than their Black counterparts. However, among college graduates, Black adults are more likely to borrow and are also more likely to hold higher balances—although balance estimates vary significantly depending on the source. Based on Braga (2016), we assume that the average Black and White adult has student loan debt balances of \$43,725 and \$31,357, respectively (Braga 2016).

While there would likely be some immediate short-term effects from debt cancellation, we assume that debt cancellation will spread out savings over time rather than result in a substantial infusion of wealth at the front end as research on student loan debt shows less borrowing and thus more saving in the future (Di Maggio et al. 2019). In particular, we model additional savings such that they, together with a nominal rate of return of 5%, amount to \$45,000 for Black college graduates and \$32,000 for White college graduates as net present value in 2016 dollars. In our simulations, we then evenly spread out these amounts over the first two decades of families' careers, so that family savings for both Black and White families each year are higher by the amount that they would have used to repay their student loans.

Furthermore, we assume that less debt results in greater college graduation rates for both African-American and White students with a larger effect for Black students. Evidence suggests that college attendance and completion rates will increase as the price of college decreases. Today, student attendance often depends on some external source of funding, such as grants or financial support from relatives, to provide a backstop to excess debt. However, not all Americans have equal access to these funding sources. We assume that approximately 12% of Black and White high school graduates currently forgo college attendance because of such liquidity constraints (Bartik et al. 2017). In reality, debt-free college may have larger effects for Black high school graduates (Bartik et al. 2017). Assuming that their preferences for debt are similar to those who attend college—they may actually have lower preferences for debt—these individuals likely would have to go deeper into debt in order to finance their education because they do not have similar access to financial support as students who attend college.⁶ In other words, the hypothetical amount of debt non-college attendees may be willing to incur and which then

would translate into higher savings without student loans could in fact be greater than the actual debt of individuals who ultimately attended college. The important implication here is that making college debt-free eliminates liquidity constraints for would-be attendees who have less access to external sources of money to finance their education. The result of this policy would be attendance and completion rates that are 12 percentage points higher for Black and White students, which equals the average effect found by Bartik, Hershbein, and Lachowska (2017) based on attending college tuition free. These additional college graduates would consequently see higher earnings and increased savings after the introduction of debt free college.

Provide Seed Capital for America's Youth in the Form of a National Baby Bonds Program

Our simulations assume that a baby bonds proposal would be enacted in 2020 and apply retroactively to all Americans ages 25 and younger. This would translate to approximately \$79,170 in assets transferred to the typical Black household in which members are age 25 and \$39,585 for the typical White household in which members are age 25 in 2020. These amounts are then the starting wealth, in addition to the amount of assumed gifts and inheritances, for both Black and White families.

Fully Enforce Civil Rights Statutes Prohibiting Housing Discrimination

Despite the presence of existing civil rights statutes, evidence demonstrates that racial discrimination remains rampant in the American housing system. In fact, 45% of African Americans report experiencing discrimination when trying to rent or buy housing, compared with just 5% of White Americans (NPR, RWJF and Chan School 2017). According to recent estimates, homes in Black neighborhoods are also undervalued by \$48,000, on average, due to racial bias alone, resulting in \$156 billion in cumulative losses for Black homeowners nationwide (Perry et al. 2018). We model an approach that promotes access to equitable wealth building by significantly expanding the resources and authority of federal, state, and local agencies charged with addressing housing discrimination.

We recognize that it would be difficult—if not impossible—to legislate away racial bias, preventing housing discrimination and holding bad actors accountable could result in substantial savings for Black households. First, we assume that this intervention would increase the Black homeownership rate from 42.3%—rounded down to 40% in the simulation—to 60%.⁷ This would cut the homeownership gap roughly in half, which implies that some barriers to Black homeownership will remain in place. Second, this policy intervention would likely reduce

⁶ An alternative explanation could be that individuals who forgo college but would attend if they did not have to take on debt simply have a lower preference for debt—i.e., they prefer to save more money now. If true, the assumption that both groups would save at the same rate after graduating college would actually understate the savings rate for individuals who would only attend college if it meant graduating debt free.

⁷ Authors' analysis of Ruggles et al. (2020).

residential segregation and the devaluation of property in Black neighborhoods. The simulation's best-case scenario for this proposal is fully enforcing civil rights statutes prohibiting housing discrimination, which would result in additional net savings of \$48,000 in 2016 dollars per Black household in which members are age 45. We first discount this additional housing wealth to age 40 since that is the approximate average age of Black homeowners based on 2016 data from the Federal Reserve Board's Survey of Consumer Finances.⁸ We use our assumed rate of return as discount rate. Next, we inflate this discounted amount from 2016 values to 2035 values, when the household turns 40 years old. Finally, we multiply this additional wealth by the share of expected homeowners—60%—under the modeled policy. The product of the additional housing wealth to all homeowners when they turn 40 years old times the share of homeowners is the average increase in Black wealth as a result of a range of housing-related policies.

Bolster Retirement Income by Establishing a National Savings Plan We base our simulations on the national savings plan (NSP) proposal developed by Madland et al. (2016). This NSP is modeled on the Thrift Savings Plan, a 401(k)-style retirement savings plan currently open to federal employees and members of Congress that is known for its low fees, sensible investment options, and simplicity (Madland et al. 2016). We estimate that the creation of an NSP would increase average retirement program participation among Black households from its current 40, rounded up from 37.5% in 2016 in the simulation, to 70%. This large jump would result because enrollment in such a retirement plan would be mandatory, but people would have the option to opt out of the plan if they did not want to participate. White households would also see a boost in program participation from 70, rounded up from 65.9% in 2016 in the simulation, to 80%. The jump in retirement plan participation for White families is smaller since the starting base is much higher.

Moreover, we assume that the creation of an NSP would increase saving rates since the new savings vehicle would overcome well-known behavioral obstacles to long-term savings such as people's status quo bias. Participants would automatically save a required minimum share of earnings and that share increases over time. We thus assume that the saving rate for new participants with college degrees will increase by 2.5 percentage points, while participants without college degrees would experience a 5 percentage point increase in their annual saving rate. The difference in saving rates by education reflects the assumption to more education goes along with higher earnings and

higher earnings translate into larger saving rates due to more flexibility to save and greater tax incentives to save.

Combat Predatory Lending by Strengthening the Consumer Financial Protection Bureau While difficult to measure with precision, we assume significant reductions in predatory lending and other discriminatory financial practices in communities of color—especially in Black communities—with the advent of a fully empowered CFPB. We assume that such a policy would result in an increase in the real rate of return of t50 basis points for Black households. This difference reflects observed differences in interest rates for Black families in the literature. Importantly, this assumption ignores potential racial gaps in financial service fees assessed, and it does not account for the fact that Black families regularly have less access to lower-cost and lower-risk financial products because of exclusionary practices in financial markets. These effects are hard to quantify with reasonable assumptions, and our simulations hence provide a lower-bound estimate of the impact of strengthening financial oversight.

Sensitivity Tests We first show our main simulation results and then present some sensitivity tests. In particular, we create one alternative scenario whereby the Black-White wealth gap closes more slowly and another whereby it shrinks more quickly.⁹ In the slower-closing scenario, we assume that both Black and White households receive the same amount in baby bonds, rather than Black families receiving a larger amount. Both groups would receive an amount equal to \$39,585 per spouse at age 25 years, or \$79,170 for the married couple in our simulation. We further assume that Black college graduation rates only increase by 10 percentage points instead of 15 percentage points as in our main simulation. Moreover, we assume that retirement plan participation will go up by only 20 percentage points rather than 30 percentage points for Black households, but that there is no difference for White households. And, we assume that Black homeownership will rise by 10 percentage points instead of 20 percentage points as in our main simulations.

For the more quickly-closing scenario, we make the following alternative assumptions. The Black college graduation rate increases by 20 percentage points instead of 15 percentage points, Black households receive three times the start-up capital from baby bonds as White households do—\$79,170 compared to \$26,390 at age 25, African-Americans' retirement plan participation goes up by 40 percentage points instead of 30 percentage points, and the Black homeownership rate also increases by 40 percentage points instead of 20 percentage points, as assumed in our main simulations.

⁸ Authors' calculations based on Fed (2017).

⁹ See Table 5 in the appendix for a summary of the assumptions underlying the main simulations and the two alternative scenarios.

In both the slow closing and quickly-closing cases, we assume no other changes to White households' wealth trajectory, other than changes to the receipt of baby bonds. We also assume no differences in the impact of stricter financial regulation since this policy has only a small effect under any possible scenario.

Factors Not Incorporated into the Simulation We intentionally left several factors out of our simulations. These include the effects of recent household composition trends, changes in savings rates over time, and wage discrimination.

This simulation does not incorporate marriage composition trends in the USA. In 2015, 17% of newlyweds were married to someone of a different race, up from 3% in 1967 (Livingston and Brown 2017). More than 8 in 10 of these marriages included one White spouse (Livingston and Brown 2017).

We also do not incorporate any changes in the savings rate over the hypothetical householder's career. One could logically assume that as household income and wealth increases, savings rates will also increase. However, householders may also incur new expenses, such as childcare and health problems associated with aging, over the course of their career. Moreover, these changes should occur among both Black and White households and thus have limited effects on simulated wealth differences.

An abundance of evidence demonstrates that wage discrimination remains a significant problem in the USA. In fact, 46%, or nearly half, of African Americans report experiencing discrimination in terms of equal pay or promotion considerations (NPR, RWJF, and Chan School 2017). These inequities almost certainly have a negative effect on wealth accumulation over Black workers' careers. However, our primary focus here is on policies that impact assets and debt. Since we assume the same age-earnings profiles for Black and White workers, our simulation results will certainly overstate the effects of all simulated policy interventions on closing the Black-White wealth gap.

Simulation Results

We first show our main simulation results and then present our sensitivity tests.

We present three sets of results from our main simulations: the total expected dollar amounts of wealth for Black and White households in 2060, the share of the Black-White wealth gap that each proposal, either in isolation or in combination with others closes by 2060, and the net present value of the remaining wealth gap in 2060 (in 2020 dollars). We calculate the net present value using the race-specific rate of return, which is higher for Black households with full financial regulation enforcement in effect.

The summary data in Table 2 first shows our baseline results. Our simulation's hypothetical Black household has a net worth of approximately \$317,000 by age 65 in 2060. In contrast, the simulation's White household has an estimated net worth of \$1.87 million (Table 2). That is, Black near-retiree households will have 16.9% the wealth of White near-retiree households. This is similar to the wealth ratios observed for Black and White near-retiree households in 2016.¹⁰ Moreover, our results show that it would take an immediate wealth transfer equal to \$219,697 in 2020 to make sure that White and Black near-retirees in 2060 will have the same average wealth (Table 2).

Each of the five policy interventions reduces the racial wealth gap (Table 2). Providing seed capital for America's youth in the form of a national baby bonds program has the single largest effect on the racial wealth gap. With this intervention, the net worth of the simulation's hypothetical Black household more than doubles, rising to almost \$800,000 by age 65. The simulation's hypothetical White household would also experience considerable gains in net worth, from \$1.87 to \$2.17 million. A national baby bonds program would shrink the Black-White wealth ratio to approximately 2.7 to 1 by 2060, still leaving a gap of \$1.37 million (Table 2). It would take an immediate transfer of \$192,711 in 2020 to close the Black-White wealth gap by 2060 (Table 2). All other four policies would leave larger wealth differences and require larger, immediate wealth transfers in addition to enacting each policy (Table 2).

Enacting all five proposals in combination would substantially reduce, but not eliminate, the racial wealth gap.¹¹ This policy approach would increase the net worth of the hypothetical Black household to \$1.28 million by age 65. This still leaves an African-American family's wealth below the level that the hypothetical White family will reach without any policy interventions. The hypothetical White household would have a net worth of \$2.45 million as a result of these interventions (Table 2). Collectively, the five proposals would reduce the Black-White wealth ratio to 1.9 to 1 by 2060, or a gap of approximately \$1.17 million. It would still require an immediate transfer of \$161,326 in 2020 to the hypothetical dual-earner Black household to close the Black-White wealth gap by 2060 (Table 2).

Table 3 summarizes our slow-closing scenario to show the sensitivity of our simulations to our underlying assumptions. Three points are noteworthy. First, the overall effects of the five proposals on the Black-White wealth gap are relatively similar to those of our main simulation results (Table 2). For example, establishing a national savings plan closes 10% of the expected Black-White gap under our main results and

¹⁰ Authors' calculations based on Fed (2017).

¹¹ See Table 6 in the appendix for a complete list of policy combinations and their impact on the Black-White wealth gap by 20,160.

Table 2 Selected Simulation Results

Assumed scenario	Wealth of white households in 2060 (in 2060 dollars)	Wealth of Black households in 2060 (in 2060 dollars)	Black to white wealth (%) in 2060	Relative reduction of the wealth gap by 2060	NPV of wealth transfer at age 25 necessary to close gap by 2060 (in 2020 dollars)
Baseline	\$1.87 m	\$317 k	16.9%	0.0%	\$219,697
Forgive student loan debt and make college debt free	\$2.03 m	\$443 k	21.8%	5.9%	\$218,966
Provide seed capital for America's youth in the form of a national baby bonds program	\$2.17 m	\$798 k	36.8%	24.0%	\$192,711
Fully enforce civil rights statutes prohibiting housing discrimination	\$1.87 m	\$396 k	21.1%	5.0%	\$208,537
Bolster Retirement income by establishing a National Savings Plan	\$2.03 m	\$513 k	25.2%	10.0%	\$214,370
Combat predatory lending by strengthening the Consumer Financial Protection Bureau	\$1.87 m	\$340 k	18.1%	1.5%	\$216,596
Combination of all five proposals	\$2.45 m	\$1.28 m	52.3%	42.6%	\$161,326

Notes: NPV stands for net present value

9.7% under the slower-closing scenario, even though the assumed effect on retirement plan participation is smaller—a 20 percentage point increase instead of a 30 percentage point gain. Second, the baby bonds proposal still has the largest single impact on the Black-White wealth gap. It now closes 20.9% of the wealth gap (Table 3) rather than 24.0% under our main results (Table 2). Finally, while the wealth gap still narrows in absolute terms under four out of the five proposals, it does so much more slowly as reflected in smaller reductions in the amount necessary to close the remaining gap with

immediate wealth transfers in 2020 (Table 3). In fact, under the baby bonds proposal, this absolute wealth transfers is greater than under the baseline (Table 3). This indicates that while baby bonds have a larger relative effect on the wealth of African-American households, they have a larger absolute impact on White wealth due to higher rates of return, when both groups receive the same amount of wealth.

Table 4 shows results under more quickly-closing assumptions. These results reinforce the points made with the slower-closing assumptions. Overall, the simulation results are close

Table 3 Selected simulation results of slow-closing scenario

Assumed scenario	Wealth of white households in 2060 (in 2060 dollars)	Wealth of Black households in 2060 (in 2060 dollars)	Black to white wealth (%) in 2060	Relative reduction of the wealth gap by 2060	NPV of wealth transfer at age 25 necessary to close gap by 2060 (in 2020 dollars)
Baseline	\$1.87 m	\$317k	16.9%	0.0%	\$219,697
Forgive student loan debt and make college debt free	\$1.99 m	\$432k	21.6%	5.7%	\$220,357
Provide seed capital for America's youth in the form of a national baby bonds program	\$2.46 m	\$798k	32.5%	20.9%	\$226,009
Fully enforce civil rights statutes prohibiting housing discrimination	\$1.87 m	\$382k	20.4%	4.2%	\$210,397
Bolster Retirement income by establishing a National Savings Plan	\$2.03 m	\$507k	25.0%	9.7%	\$215,126
Combat predatory lending by strengthening the Consumer Financial Protection Bureau	\$1.72 m	\$328k	19.1%	2.6%	\$238,797
Combination of all five proposals	\$2.72 m	\$ 1,249,293	45.9%	34.9%	\$207,081

Notes: NPV stands for net present value

Table 4 Selected simulation results of slow-closing scenario

Assumed scenario	Wealth of white households in 2060 (in 2060 dollars)	Wealth of Black households in 2060 (in 2060 dollars)	Black to white wealth (%) in 2060	Relative reduction of the wealth gap by 2060	NPV of wealth transfer at age 25 necessary to close gap by 2060 (in 2020 dollars)
Forgive student loan debt and make college debt free	\$1,994,351	\$134,638	24.4%	9.0%	\$212,630
Provide seed capital for America's youth in the form of a national baby bonds program	\$2.07 m	\$798k	38.6%	26.1%	\$178,922
Bolster Retirement income by establishing a National Savings Plan	\$2.03 m	\$518k	25.5%	10.2%	\$213,614
Fully enforce civil rights statutes prohibiting housing discrimination	\$1.87 m	\$422k	22.5%	6.7%	\$204,817
Combination of all five proposals	\$2.33 m	\$1,351,191	58.0%	49.5%	\$137,559

Notes: NPV stands for net present value

to the baseline. Moreover, baby bonds have the single largest effect on reducing wealth inequality between Black and White households by 2060 (Table 4). And, the immediate transfer amounts necessary to close the remaining gap tend to fall faster—except for the national savings plan—than under our main results (Tables 2 and 4).

Discussion

We provide simulations of a range of large-scale policy proposals that have been suggested to shrink the persistent and large gap in wealth between Black and White households. Such proposals have gained renewed importance and urgency in the context of the global pandemic. It has highlighted the need for personal wealth as a means to gain financial security when health emergencies and unemployment strike and as a tool to invest in a families' future.

Our simulations highlight a number of important aspects of such proposals. First, no single proposal is enough to close the wealth gap between Black and White households. Second, the proposal providing seed capital for American families in the form of baby bonds has the single largest effect. Third, even with assumptions that new policies will have rather substantial impacts and with the implementation of all five proposals, a married Black couple around age 25 would still need an immediate wealth transfer of about \$137,559 (Table 4) in 2020 to close the gap with a married White couple of similar age by 2060. Without such additional cash transfers, the Black-White wealth gap will persist for the future. Fourth, the relative efficacy of each proposal has only a limited effect on shrinking the Black-White wealth gap as our sensitivity results show (Tables 2 through 4).

Each of these points requires some additional consideration. The impact of all five proposals on the Black-White wealth gap is limited but for different reasons. For baby bonds, debt-free college and a national savings plans, their effect on the wealth gap between Black and White families is naturally limited because those proposals benefit both Black and White families. The effects will likely be larger for Black families since they have less wealth to begin with and they may thus be more likely to qualify for the new measures. But this disproportionate gain is not enough to eliminate the wealth gap by 2060. In comparison, proposals on enforcing civil rights and anti-discrimination legislation with respect to housing and financial market regulations only impact Black households. Yet, their effects are very modest. In the case of housing and mortgage market policies, the impact is limited as the additional housing wealth makes up a comparatively small share of total average wealth for Black households. The impact of stricter financial market regulations enforcement is also limited since it primarily lowers the cost of borrowing, but has likely little effect on asset returns. Yet, assets are much larger than debt since on average households have positive wealth.

The simulations show that baby bonds have the single largest effect. Combining baby bonds with the other four proposals doubles the impact on closing the Black White wealth gap (Table 2). The main lesson from this result is that it is not enough to just transfer wealth to African-American families but to supplement a wealth transfer with ongoing regulatory and legislative tools to ensure that Black families can build wealth free of predatory or discriminatory actions on an ongoing basis in ways that fit their needs.

Even when all policies are immediately and consistently enacted a massive wealth gap will remain. It would take somewhere between \$138,000 and \$226,000 of immediate wealth

transfers in 2020 to a young, married Black couple in 2020 to close the Black White wealth gap by 2060 in our simulations. This gap reflects the fact that the average White family receives intergenerational wealth transfers equal to approximately \$200,000 in 2020 over the course of their lifetime. It is important to note that most wealth is accumulated through inheritances, but s-intergenerational wealth transfers can also consist of gifts, stock or land, and access to larger social networks which can help with employment opportunities and lower rates of incarceration and victimization by the criminal justice system.

How important are those wealth transfers? Figure 1 shows the wealth transfers necessary under the baseline and each of the five proposals to close the Black-White wealth gap with and without White families receiving intergenerational wealth transfers. Assuming no intergenerational wealth transfers to Whites will also require substantially fewer wealth immediate wealth transfers to Black families. Under the baseline scenario, for instance, it would only require \$20,650 instead of \$219,697 in our main simulations (Fig. 1). Intergenerational wealth transfers are thus a key driver of the Black-White wealth gap, requiring policy measures that overwhelmingly or exclusively benefit Black families to eliminate this inequality.

Several points underscore the case for such immediate and large transfers targeted at Black households. As we discussed before, White families are more likely to receive inheritances and gifts and when families receive such transfers, those inheritances and gifts are larger for White families than for Black families. Moreover, the Black-White wealth gap widens for the same cohorts over time (Hanks, Solomon and Weller, 2018; Urban Institute [n.d.](#)).

Figure 2 below illustrates this point. It shows the average real wealth for married couples between the ages of 23 and 38 in 1989, who were between 50 and 65 years old in 2016. White married couples had higher wealth than Black couples to start with—\$201,968 compared to \$81,037 (in 2016 dollars) (Fig. 1). Assuming average saving rates of 6% and a real rate of return of 3%, the average wealth of married White households should have grown to \$790,260 by 2016 and that of Black couples to \$360,058.¹² Instead, average White wealth increased to \$1,983,771 by 2016, while Black couples' wealth rose to \$179,008. The average wealth of White couples grew well above the level that should have been expected under average assumptions, while the opposite was true for Black married couples. The greater-than-expected wealth increase for married White couples likely reflects intergenerational wealth transfers. In contrast, the smaller-than-expected wealth increases for Black married couples could reflect continued widespread discrimination in

labor, housing, mortgage, and financial markets. The observed wealth gains for actual married couples are systematically larger than those of married Black couples, reflecting difficult to observe yet systematic wealth advantages for White families.

Timing is another aspect to consider in the context of immediate, large cash transfers. The wealth gap between Black and White families has persisted for centuries without a clear shrinking trend. Our simulations show that if five large-scale policy proposals were immediately enacted with an immediate transfer of wealth to young African-Americans, modeled as a baby bond, it would still take several decades before half of the expected wealth gap would disappear. On the other hand, debt-free college would in relatively short order boost college attendance and graduation rates while also increasing savings among Black households in subsequent decades. Similarly, home ownership rates and housing appreciation could see gains in the coming years and decades if existing civil rights and financial market legislation were fully enforced. But even these shorter-term gains would take decades to materialize. On the longer-term side, the benefits of a national retirement savings plan and of strict financial market regulation by the Consumer Financial Protection Bureau would only completely materialize over a person's lifetime. In fact, the largest benefits from higher rates of return, which would follow from stricter enforcement of financial market regulation, would come only later in life, after people had amassed measurable wealth. To have substantial and more immediate impact on the racial wealth gap between Black and White households, an immediate cash or asset transfer would have the most impact and provide financial security as well as real economic opportunity to Black families and communities.

Our results further underscore this point that any effort to eliminate the wealth gap between Black and White families will require immediate, large-scale cash transfers through its sensitivity tests. Our results show that there is only limited room to make each policy proposal a lot more effective. Clearly, reaching more people with a policy and making sure that households get to keep more of their wealth, for example, through stricter regulations and enforcement will shrink the Black-White wealth gap. Those effects are limited in shrinking the wealth gap between Black and White families because White families also benefit from these policies. Eliminating the wealth gap also requires increasing wealth across a wide population spectrum. Doubling homeownership rates and college graduation rates are laudable and necessary policy goals, but they will require massive investments in policy infrastructure. Otherwise, if the take up rates of the new policies could be low, the policies could not have a large effect on closing the wealth gap.

¹² Authors' calculations based on Fed (2017).

Fig. 1 Immediate wealth transfers to Black families in 2020 necessary to close Black-White wealth gap by 2060 with and without intergenerational wealth transfers to White families by policy proposal

Conclusion

Household wealth is a critical tool for families to invest in their own future and to stay financially secure during an emergency such as a health care crisis or a layoff. Yet, massive household wealth inequality by race persists. Black families consistently have a fraction of the wealth of White families, including after accounting for relevant factors. There is no indication in the data that this wealth gap has diminished over time. To address this inequality, experts and policymakers have proposed a number of policies, all of which have the potential to reduce the Black-White wealth gap.

We evaluate the potential impact on the Black-White wealth gap of five large-scale proposals. These include canceling student loan debt and making college attendance debt free, providing each American child with start-up capital

known as baby bonds, enforcing civil rights legislation to eliminate housing market discrimination, enforcing financial market regulations, and establishing a national savings plan to ensure that all households have access to low-cost, low-risk retirement savings. We provide a number of simulations based on the existing data and relevant literature to evaluate the effectiveness of these proposals in reducing and possibly eliminating the Black-White wealth gap.

Our simulations illustrate several key points. These proposals all have a positive effect on reducing the Black-White wealth gap over time, albeit to varying degrees. Baby bonds have the single largest effect, but even the majority of the Black-White wealth gap will persist. Moreover, if all five policies were immediately enacted and consistently applied, about half of the Black-White wealth gap would still exist 40 years later. There are two primary reasons for the

Fig. 2 Average real wealth of married couples between the ages of 23 and 38 in 1989, by race
Notes: Authors' calculations based on Board of Governors, Federal Reserve System. Various Years 1989–2016. Survey of Consumer Finances. Washington, DC: Fed. Dollar figures are in 2016 dollars. Nominal dollars deflated by Consumer Price Index for Urban Consumers Research Series (CPI-U-RS). Sample includes married households, who indicate that they are not retired

persistence of the Black-White wealth gap over time in our simulation—lack of intergenerational wealth transfers and the fact that all proposals also increase wealth for White families. The most relevant proposals such as student loan debt cancellation and baby bonds do not exclusively boost wealth for Black families, but also significantly increase wealth among White families. Therefore, White families not only benefit from intergenerational wealth transfers that are largely unavailable to Black families, they will also benefit from these proposals. Only large-scale, immediate wealth transfers to

Black families would fully eliminate the Black-White wealth gap. Therefore, we conclude that in order to eliminate the wealth gap by 2060, the federal government must provide reparations, as direct payments, to Black households.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflicts of interest.

Appendix

Table 5 Summary assumptions underlying simulations and sensitivity tests

	Main simulations	Slower wealth gap closing	Faster wealth gap closing
<i>Forgive student loan debt and make college debt free</i>			
Baseline Black college graduation rate	25%	25%	25%
Increase in Black college graduation rate	15%	10%	20%
Baseline White college graduation rate	45%	45%	45%
Increase in white college graduation rate	10%	10%	10%
<i>Provide seed capital for America's youth in the form of a national baby bonds program</i>			
Black start-up wealth	\$39,585	\$39,585	\$39,585
White start-up wealth	\$19,792.50	\$39,585	\$13,195
<i>Bolster Retirement income by establishing a National Savings Plan</i>			
Baseline Black retirement plan participation rate	40%	40%	40%
Increase in Black retirement plan participation rate	30%	20%	40%
Baseline white retirement plan participation rate	70%	70%	70%
Increase in white retirement plan participation rate	10%	10%	10%
<i>Combat predatory lending by strengthening the Consumer Financial Protection Bureau</i>			
Increase in Black rate of return	0.5%	0.3%	1.0%
<i>Fully enforce civil rights statutes prohibiting housing discrimination</i>			
Baseline Black homeownership rate	40%	40%	40%
Increase in Black homeownership rate	20%	10%	40%
Baseline white homeownership rate			
Increase in white homeownership rate			
<i>Additional assumptions</i>			
Inflation rate	2%	2%	2%
White real rate of return	3%	3%	3%
Saving rate for college graduates	8%	8%	8%
Saving rate for non-college graduates	4%	4%	4%
White inheritance	\$200,000	\$200,000	\$200,000

Table 6 Complete simulation results

Assumed scenario	Wealth of white households in 2060 (in 2060 dollars)	Wealth of Black households in 2060 (in 2060 dollars)	Black to white wealth (%) in 2060	Relative reduction of the wealth gap by 2060	NPV of wealth transfer at age 25 necessary to close gap by 2060 (in 2020 dollars)
Baseline	\$1.87m	\$317k	16.9%	0.0%	\$219,697
A	\$2.03m	\$443k	21.8%	5.9%	\$218,966
B	\$2.17m	\$798k	36.8%	24.0%	\$192,711
C	\$2.03m	\$513k	25.2%	10.0%	\$214,370
D	\$1.87m	\$340k	18.1%	1.5%	\$216,596
E	\$1.87m	\$396k	21.1%	5.0%	\$208,537
A, B	\$2.32 m	\$924k	39.8%	27.6%	\$191,980
A, C	\$2.15m	\$617k	28.6%	14.1%	\$213,902
A, D	\$2.03m	\$476k	23.5%	7.9%	\$214,160
A, E	\$2.03m	\$521k	25.7%	10.6%	\$207,806
B, C	\$2.32m	\$994k	42.7%	31.1%	\$187,384
B, D	\$2.17m	\$871k	40.2%	28.0%	\$182,555
B, E	\$2.17m	\$877k	40.5%	28.3%	\$181,551
C, D	\$2.03m	\$549k	27.0%	12.2%	\$209,352
C, E	\$2.03m	\$591k	29.1%	14.7%	\$203,210
D, E	\$1.87m	\$425k	22.7%	6.9%	\$204,527
A, B, C	\$2.45m	\$1.10m	44.9%	33.7%	\$186,915
A, B, D	\$2.32m	\$1.01m	43.4%	31.9%	\$180,119
A, B, E	\$2.32m	\$1.00m	43.2%	31.7%	\$180,820
A, C, D	\$2.15m	\$663k	30.8%	16.7%	\$207,435
A, C, E	\$2.15m	\$696k	32.3%	18.5%	\$202,742
A, D, E	\$2.03m	\$561k	27.7%	13.0%	\$202,091
B, C, D	\$2.32m	\$1.08m	46.5%	35.6%	\$175,311
B, C, E	\$2.32m	\$1.07m	46.1%	35.2%	\$176,224
B, D, E	\$2.17m	\$956k	44.1%	32.7%	\$170,486
C, D, E	\$2.03m	\$634k	31.2%	17.2%	\$197,284
A, B, C, D	\$2.45m	\$1.19m	48.8%	38.4%	\$173,394
A, B, C, E	\$2.45m	\$1.18m	48.1%	37.5%	\$175,755
A, B, D, E	\$2.32m	\$1.09m	47.1%	36.4%	\$168,050
A, C, D, E	\$2.15m	\$748k	34.7%	21.4%	\$195,367
B, C, D, E	\$2.32m	\$1.17m	50.1%	40.0%	\$163,243
A, B, C, D, E	\$2.45m	\$1.28m	52.3%	42.6%	\$161,326

Notes: (A) Forgive student loan debt and make college debt free; (B) Provide seed capital for America's youth in the form of a national baby bonds program; (C) Bolster Retirement income by establishing a National Savings Plan; (D) Combat predatory lending by strengthening the Consumer Financial Protection Bureau; (E) Fully enforce civil rights statutes prohibiting housing discrimination

References

- Ajilore O. The persistent black-white unemployment gap is built into the labor market. CAP brief. Washington: Center for American Progress; 2020a. <https://www.americanprogress.org/issues/economy/news/2020/09/28/490702/persistent-black-White-unemployment-gap-built-labor-market/>. Accessed Oct 2020
- Ajilore O. On the persistence of the black-white unemployment GAP. CAP report. Washington: Center for American Progress; 2020b. <https://www.americanprogress.org/issues/economy/reports/2020/02/24/480743/persistence-black-White-unemployment-gap/>. Accessed Oct 2020
- Asante-Muhammad D, Collins C, Hoxie J, Nieves E. Report: ever-growing gap without change, African-American and Latino families won't match white wealth for centuries. Washington: Prosperity Now and Institute for Policy Studies; 2016. available at https://ips-dc.org/wp-content/uploads/2016/08/The-Ever-Growing-Gap-CFED_IPS-Final-2.pdf. Accessed Oct 2020
- Bartik TJ, Hershbein BJ, Lachowska M. The effects of the Kalamazoo promise scholarship on college enrollment, persistence, and completion. Kalamazoo: W.E. Upjohn Institute for Employment Research; 2017. available at https://research.upjohn.org/cgi/viewcontent.cgi?article=1246&context=up_workingpapers. Accessed Oct 2020
- Bartlett R, Morse A, Stanton R, Wallace N. Consumer-lending discrimination in the FinTech Era. Berkeley: University of California, Berkeley; 2019. available at <http://faculty.haas.berkeley.edu/morse/research/papers/discrim.pdf>
- Bayer P, Casey M, Ferreira F, McMillan R. Racial and ethnic price differentials in the housing market. *J Urban Econ*. 2017;102:91–105.
- Bialik K, Fry R “Millennial life: how young adulthood today compares with prior generations,” Pew Res Center, 2019, available at <https://www.pewsocialtrends.org/essay/millennial-life-how-young-adulthood-today-compares-with-prior-generations/>. Accessed Oct 2020.
- Biden J Plan for Education Beyond High School: Joe Biden. Retrieved 2020, from <https://joebiden.com/beyondhs/>. Accessed Oct 2020.
- Board of Governors, Federal Reserve System. Survey of Consumer Finances 2016. Washington, DC: Fed; 2017. Accessed Oct 2020
- Boddupalli A, Rueben K. How income taxes interact with racial disparities. In: TaxVox. Washington: Tax Policy Center; 2020.
- Borowczyk-Martins D, Bradley J, Tarasonis L. Racial discrimination in the U.S. labor market: employment and wage differentials by skill. *Labour Econ*. 2017;49(December):106–27.

- Braga E. Racial and ethnic differences in family student loan debt. Washington: Urban Institute; 2016. available at <https://www.urban.org/sites/default/files/publication/82896/2000876-Racial-and-Ethnic-Differences-in-Family-Student-Loan-Debt.pdf>. Accessed Oct 2020
- Choi J, Zhu J, Goodman L, Ganesh B. Millennial homeownership: why is it so low, and how can we increase it? Washington: Urban Institute; 2018. available at https://www.urban.org/sites/default/files/publication/98729/millennial_homeownership.pdf
- Committee for a Responsible Federal Budget. Cory Booker's "Baby Bonds" Plan DEC 18, 2019. CFRB U.S. Budget Watch 2020. Washington: CFRB; 2019. <http://www.crfb.org/blogs/cory-bookers-baby-bonds-plan>. Accessed Oct 2020
- Conley D, Glauber R. Wealth mobility and volatility in black and white. CAP report. Washington: Center for American Progress; 2008.
- Conley C. Being black, living in the red: race, wealth, and social policy in America. 10th Anniversary ed. Sacramento: University of California Press; 2009.
- Copeland C. Employment-based retirement plan participation: geographic differences and trends, 2013. EBRI Issue Brief No. 405. Washington: Employee Benefits Research Institute; 2014.
- Dal Borgo M. Ethnic and racial disparities in saving behavior. *J Econ Inequal*. 2019;17:253–83.
- De La Cruz-Viesca M, Chen Z, Ong P, Hamilton D, Darity W. The color of wealth in Los Angeles. San Francisco: Federal Reserve Bank of San Francisco; 2016.
- DeSilver D, Bialik K. "Blacks and Hispanics face extra challenges in getting home loans," Pew Research Center Fact Tank, 2017, available at <https://www.pewresearch.org/fact-tank/2017/01/10/blacks-and-hispanics-face-extra-challenges-in-getting-home-loans/>. Accessed Oct 2020.
- Detting LJ, Hsu J, Jacobs L, Moore K, Thompson J. "Recent trends in wealth-holding by race and ethnicity: evidence from the survey of consumer finances," FEDS notes. Washington: Board of Governors of the Federal Reserve System; 2017. <https://doi.org/10.17016/2380-7172.2083>.
- Dietrich J, Liu F, Parrish L, Roell D, Skhirtladze A. Data point: 2017 mortgage market activity and trends: a first look at the 2017 HMDA data. Washington: Consumer Financial Protection Bureau; 2018. available at https://files.consumerfinance.gov/f/documents/bcfp_hmda_2017-mortgage-market-activity-trends_report.pdf. Accessed Oct 2020
- Di Maggio M, Kalda A, Yao V. Second chance: life without student debt. Cambridge: National Bureau of Economic Research; 2019. available at <https://www.nber.org/papers/w25810>. Accessed Oct 2020
- Espinosa L, Turk J, Taylor T, Chessman M. Race and ethnicity in higher education: a status report. Washington: American Council on Education and New York: Andrew W. Mellon Foundation; 2019. available at <https://1xfsu31b52d33idlp13twos-wpengine.netdna-ssl.com/wp-content/uploads/2019/02/Race-and-Ethnicity-in-Higher-Education.pdf>. Accessed Oct 2020
- Feiveson L, Sabelhaus J. How does intergenerational wealth transmission affect wealth concentration?. FEDS notes. Washington: Federal Reserve; 2018.
- Frye J. On the frontlines at work and at home: the disproportionate economic effects of the coronavirus pandemic on women of color. CAP report. Washington: Center for American Progress; 2020.
- Garcia J. The color of debt: credit card debt by race and ethnicity. Demos issue brief. New York: Demos; 2010.
- Gittleman M, Wolff W. Racial differences in patterns of wealth accumulation. *J Hum Resour*, University of Wisconsin Press. 2004;39(1): 193–233.
- Hamilton D, Darity W. Can 'baby bonds' eliminate the racial wealth gap in putative post-racial America? *The Review of Black Political Economy*. 2010;37(3–4) available at <https://journals.sagepub.com/doi/abs/10.1007/s12114-010-9063-1>. Accessed Oct 2020.
- Hamilton D, Darity W, Price A, Tippet R, Sridhara V. Umbrellas don't make it rain: why studying and working hard isn't enough for black Americans. Oakland: Insight Center; 2015.
- Hanks A, Solomon D, Weller C. Systematic Inequality: How America's structural racism helped create the black-white wealth gap. CAP Report. Washington, DC: Center for American Progress; 2018.
- Holmes T Credit card race, age, gender statistics. 2016 Creditcard.com.
- Huelsman M. The debt divide: the racial and class bias behind the 'new normal' of student borrowing. New York: Demos; 2015. available at <https://www.demos.org/sites/default/files/publications/Mark-Debt%20divide%20Final%20%28SF%29.pdf>. Accessed Oct 2020
- Kijakazi K, Brooks Atkins RM, Paul M, Price A, Hamilton D, Darity W. The color of wealth in the Nation's capital. In: A joint publication of the Urban Institute, Duke University, the new school and the insight center for community economic development. Washington: Urban Institute; 2016.
- Ladd H. Evidence on discrimination in mortgage lending. *J Econ Perspect*. 1998;12(2):41–62.
- Livingston G, Brown A "Intermarriage in the U.S. 50 years after loving v. Virginia," Pew Research Center, 2017, available at <https://www.pewsocialtrends.org/2017/05/18/intermarriage-in-the-u-s-50-years-afving-v-virginia/>. Accessed Oct 2020.
- Madland D, Rowell A, Davis R. Improving Americans' retirement outcomes through the National Savings Plan. CAP report. Washington: Center for American Progress; 2016. <https://www.americanprogress.org/issues/ext/2016/01/28/130136/improving-americans-retirement-outcomes-through-the-national-savings-plan/>. Accessed Oct 2020
- Maxwell C. The coronavirus crisis is worsening racial inequality. CAP brief. Washington: Center for American Progress; 2020. <https://www.americanprogress.org/issues/race/news/2020/06/10/486095/coronavirus-crisis-worsening-racial-inequality/>. Accessed Oct 2020
- McKernan SM, Ratcliffe C, Simms M, Zhang S. Private transfers, race, and wealth. Washington: Urban Institute; 2011. available at <https://www.urban.org/sites/default/files/alfresco/publication-pdfs/412371-Private-Transfers-Race-and-Wealth.PDF>
- Miller B, Campbell C, Cohen BJ, Hancock C. Addressing the \$1.5 trillion in federal student loan debt. Washington: Center for American Progress; 2019. available at <https://www.americanprogress.org/issues/education-postsecondary/reports/2019/06/12/470893/addressing-1-5-trillion-federal-student-loan-debt/>. Accessed Oct 2020
- Muñoz A, Kim M, Chang M, Jackson R, Hamilton D, Darity W. The color of wealth in Boston. Boston: Federal Reserve Bank of Boston; 2015.
- Munnell A, Tootell G, Browne L, McEneaney J. Mortgage lending in Boston: interpreting HDMA data. *Am Econ Rev*. 1996;86(1):25–53.
- National Center for Education Statistics. Table 104.20. Percentage of persons 25 to 29 years old with selected levels of educational attainment, by race/ethnicity and sex: selected years, 1920 through 2017. Washington: NCES; 2017. available at https://nces.ed.gov/programs/digest/d17/tables/dt17_104.20.asp. Accessed Oct 2020
- National Consumer Law Center. Racial disparities in auto loan markups state-by-state data. Washington: NCLC; 2015.
- NPR, Robert Wood Johnson Foundation, & Harvard T.H. Chan School of Public Health. Discrimination in America: experiences and views on affects of discrimination across major population groups in the United States. Princeton: RWJF; 2017. Available at <https://www.rwjf.org/en/library/research/2017/10/discrimination-in-america-experiences-and-views.html>. Accessed Oct 2020
- Oliver M, Shapiro T, editors. Black wealth, white wealth: a new perspective on racial inequality. 2nd ed. New York: Routledge; 2009.
- Perry AM, Rothwell J, Harshbarger D. The devaluation of assets in black neighborhoods: the case of residential property. Washington:

- Brookings Institution; 2018. available at <https://www.brookings.edu/research/devaluation-of-assets-in-black-neighborhoods/>
- Pope DG, Sydnor J. What's in a picture?: evidence of discrimination from Prosper.com. *J Human Resource*. 2011;46(1):53–92.
- Rothstein R. The color of law: a forgotten history of how our government segregated America. New York, NY: Liveright Publishing Corporation, a division of W. W. Norton & Company; 2018.
- Ruggles S, Flood S, Goeken R, Grover J, Meyer E, Paca J, et al. Integrated public use microdata series, U.S. Census Data for Social, Economic, and Health Research, 2013–2017 American Community Survey: 5-year estimates. Minneapolis: Minnesota Population Center; 2019. available at <https://usa.ipums.org/usa/> last accessed July 2019
- Ruggles S, Flood S, Goeken R, Grover J, Erin Meyer E, Pacas J, et al. IPUMS USA: Version 10.0 [dataset]. Minneapolis, MN: IPUMS; 2020. <https://doi.org/10.18128/D010.V10.0>.
- Sabelhaus J, Henriques Volz A. Are disappearing employer pensions contributing to rising wealth inequality? FEDS Notes February 1. Washington: Federal Reserve; 2019.
- Sanders B Free college, Cancel debt. 2020, Retrieved June 23, 2020, from <https://berniesanders.com/issues/free-college-cancel-debt/>. Accessed Oct 2020.
- Solomon D, Maxwell C, Castro A. Systematic inequality: displacement, exclusion, and segregation. CAP report. Washington: Center for American Progress; 2019. <https://www.americanprogress.org/issues/race/reports/2019/08/07/472910/systematic-inequality-economic-opportunity/>. Accessed Oct 2020
- Spalter-Roth R, Lowenthal T. Race, ethnicity, and the American labor market: What's at work?. ASA Series on How Race and Ethnicity Matters. American Sociological Society. Sydney S. Spivack Program in Applied Social Research and Social Policy 2005.
- Thompson JP, Suarez GA. Exploring the racial wealth gap using the survey of consumer finances. Washington: Board of Governors of the Federal Reserve System; 2015. available at <https://www.federalreserve.gov/econresdata/feds/2015/files/2015076pap.pdf>. Accessed Oct 2020
- Urban Institute, "Features: nine charts about wealth inequality in America (n.d.)," available at apps.urban.org/features/wealth-inequality-charts/. Accessed June 2020.
- U.S. Department of Housing and Urban Development. Housing discrimination against racial and ethnic minorities 2012. Executive summary. Washington: HUD; 2012.
- Valenti J, Solomon D. Communities of color cannot afford a weakened CFPB. Washington: Center for American Progress; 2017. available at <https://www.americanprogress.org/issues/economy/reports/2017/03/28/429270/communities-color-cannot-afford-weakened-cfpb/>
- Wachter S, Megbolugbe I. Impacts of housing and mortgage market discrimination racial and ethnic disparities in homeownership. *Hous Policy Debate*. 2010;3(2):332–70.
- Warren, E. My plan to cancel student loan debt on day one of my presidency 2020. Retrieved June 23, 2020, from <https://elizabethwarren.com/plans/student-loan-debt-day-one>. Accessed Oct 2020.
- Weller C Systemic racism makes Covid-19 much more deadly for African-Americans. *Forbes*. June 18 2020a. <https://www.forbes.com/sites/christianweller/2020/06/18/systemic-racism-makes-covid-19-much-more-deadly-for-african-americans/#5854d8e67feb>. Accessed Oct 2020.
- Weller C Four charts show the larger burden of the recession on people of color. *Forbes*. October 7 2020b. <https://www.forbes.com/sites/christianweller/2020/10/07/four-charts-show-the-larger-burden-of-the-recession-on-people-of-color/#6803a5f61b1e>. Accessed Oct 2020.
- Weller C. Families still drowning in consumer debt, Adding To Financial Insecurity *Forbes* January 18 2020c. <https://www.forbes.com/sites/christianweller/2020/01/18/families-still-drowning-in-consumer-debt-adding-to-financial-insecurity/#81b8a517c5b2>.
- Weller C. Credit access, the costs of credit and credit market discrimination. *Rev Black Polit Econ*. 2009;36(1):7–28.
- Weller C, Ghilarducci T. The inefficiencies of existing retirement savings incentives. CAP report. Washington: Center for American Progress; 2015.
- Weller C. African Americans face systematic obstacles to getting good jobs. CAP brief. Washington: Center for American Progress; 2019.
- Weller C, Hanks A. The widening racial wealth gap in the United States after the great recession. *Forum Soc Econ*. 2018;47(2):237–52.

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