

Baby Bonds

Income-Based Program Designs Show Promise for Closing the Racial Wealth Gap

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Authors

Lia Mitchell
Senior Analyst, Policy Research

Aron Szapiro
Head of Policy Research

Contributors

Andrea Bailiff-Gush
Senior Product Marketing Manager,
Data & Research

Sarah Bush
Director, Manager Research

Hannah Dorsey
Customer Success Manager,
Enterprise Products

Margaret Giles
Data Journalist

Jeongmin Lee
Associate Product Manager

Michael Leung
Behavioral Product Manager

Sachin Nagarajan
Data Journalist

Caitlin Veno
Copy Editor

Executive Summary

Every three years the Federal Reserve System releases the Survey of Consumer Finances, and every three years, it reveals a large racial wealth gap. In 2019, the most recent survey available, average white families had more than 7 times the wealth of average Black families¹, the same ratio surveys find as far back as 1962.² One policy solution that could help close this gap is “baby bonds,” as advanced by Hamilton and Darity.³ In the simplest terms, the government would contribute to savings accounts for children under 18, with the contributions determined by family income or wealth. When a recipient turns 18, the money can go toward certain uses, such as college or a house.

Morningstar supports the concept of baby bonds in practice to help children from lower-income families, but we are not endorsing any particular bill or program design. In this paper, we examine whether the income-based baby bond program proposed in the American Opportunity Accounts Act can address the racial wealth gap, given the literature suggests that income and wealth may not be that closely correlated. We find that baby bonds can have a significant impact on the wealth gap when examining the wealth available to each child when reaching 18. However, their impact is limited at the household level primarily because of home equity wealth. Simply put, white families have so much more wealth in home equity than Black families that it swamps the effects of baby bonds. While home equity is undoubtedly important, and families that own their own homes can and

- 1 Bhutta, N., Chang, A., Dettling, L., & Hsu, J. 2020. “Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances.” *FEDS Notes*. <https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.htm>
- 2 Aliprantis, D., & Carroll, D. 2019. “What Is Behind the Persistence of the Racial Wealth Gap?” (Cleveland: Federal Reserve Bank of Cleveland). <https://www.clevelandfed.org/newsroom-and-events/publications/economic-commentary/2019-economic-commentaries/ec-201903-what-is-behind-the-persistence-of-the-racial-wealth-gap.aspx>
- 3 Hamilton, D., & Darity, W. 2010. “Can ‘Baby Bonds’ Eliminate the Racial Wealth Gap in Putative Post-Racial America?” *Rev. Black Political Economy*, Vol. 37, No. 3, P. 207. https://www.researchgate.net/publication/227301907_Can_'Baby_Bonds'_Eliminate_the_Racial_Wealth_Gap_in_Putative_Post-Racial_America

do use second mortgages for cash assistance, getting it involves borrowing against a home (or selling it). Therefore, we think the finding that the income-based baby bonds program could narrow the nonhousing wealth gap has profound policy implications.

Key Takeaways

- ▶ “Baby bonds” could help narrow the persistent racial wealth gap in the United States.
- ▶ Our analysis uses the American Opportunity Accounts Act design to assess the impact that income-based baby bonds would have on addressing the racial wealth gap. The program starts with an initial \$1,000 contribution and then annual contributions up to \$2,000, based on how the family income compares with the poverty line, until the participant turns 18. Those funds then can go toward certain qualified expenses.
- ▶ Home equity plays a major role in how well baby bonds close the gap. When including home equity in a family’s wealth, the gap is larger than when measuring household wealth without it.
- ▶ We identify some areas of improvement for baby bonds that could help maximize their benefit, such as supplemental payments for older children, options for long-term investing, and integration with 529 college savings plans.

Background

Quantifying the Racial Wealth Gap

According to the 2019 Survey of Consumer Finances, white households’ median wealth stood at \$188,200 compared with \$24,100 for Black households and \$36,100 for Hispanic households.⁴ The racial wealth gap closed slightly in 2007 (from a 7-to-1 average ratio to a 5-to-1 average ratio), but the global financial crisis hit Black families particularly hard, and the racial wealth gap shot back up to the historical levels of inequality.⁵

Researchers disagree in the degree to which they find differences in incomes between white, Hispanic, and Black families explain the racial wealth gap. Some find that age, education, and marital status, rather than income differences, drive wealth disparities across families.⁶ Hamilton and Darity argue that wealth itself propagates the racial wealth gaps, arguing that inheritances, bequests,

4 Bhutta, N., Chang, A., Dettling, L., & Hsu, J. 2020. “Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances.” *FEDS Notes*. <https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.htm>

5 Ibid.

6 Juster, F.T., Smith, J.P., Dejour, G., & Stafford, F. 1999. “The Measurement and Structure of Household Wealth.” (Santa Monica: RAND Corp.) <https://www.rand.org/pubs/reprints/RP833.html>.

and family transfers account for more of the wealth gap than any other factor, including income, education, and household structure.⁷ This wealth gap also could be self-propagating, with wealthier families better able to position their children to attain higher education, particularly for first-generation college students.⁸ Barsky et al. conclude that roughly two thirds of the gap between white and Black families is attributable to differences in income.⁹ Other factors could include a tax code that provides more benefits to white families,¹⁰ differences in home ownership,¹¹ or differences in how households invest.¹² Given this disparity of views in the literature on how closely income and wealth are correlated, we examine to what extent, if any, an income-based baby bonds program might address the wealth gap. Such analysis would demonstrate whether income and wealth are sufficiently related for income to be a reasonable proxy for wealth in a baby bond program design.

Baby Bonds as a Policy Solution

Here's how baby bonds work: Children under 18 would receive government contributions to savings accounts regardless of race based on family income or wealth. (Wealth is much less practical from an operational perspective, and our research suggests income is a reasonable proxy.) When the child turns 18, the money can be used to pay for college, to buy a home, or to start a business. Even though the program does not explicitly consider race, baby bonds have the potential to dramatically reduce the racial wealth gap.

Zewde completed the most-notable simulation on the degree to which a wealth-based baby bond would reduce the racial wealth gap, finding that one program design could reduce the racial wealth gap from 16-to-1 for young adults to just 1.4-to-1.¹³ The design Zewde models involves a one-time, asset-based payment on a sliding scale for new babies that compounds over time. Zewde also focuses her analysis on wealth for young adults that head their own household, as opposed to examining the resources available at age 18 for a child that may continue to be a dependent.

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- 7 Hamilton, D., & Darity, W. 2010. "Can 'Baby Bonds' Eliminate the Racial Wealth Gap in Putative Post-Racial America?" *Rev. Black Political Economy*, Vol. 37, No. 3, P. 207 https://www.researchgate.net/publication/227301907_Can_'Baby_Bonds'_Eliminate_the_Racial_Wealth_Gap_in_Putative_Post-Racial_America
 - 8 Braga, B., McKernan, S.M., Ratcliffe, C., & Baum, S. 2017. "Wealth Inequality Is a Barrier to Education and Social Mobility." *Urban Institute: Elevate the Debate*. <https://www.urban.org/research/publication/wealth-inequality-barrier-education-and-social-mobility>
 - 9 Barsky, R., Bound, J., Charles, K.K., & Lupton, J.P. 2002. "Accounting for the Black-White Wealth Gap: A Nonparametric Approach." *J. American Statistical Assoc.*, Vol. 97, No. 459, P. 663. <https://www.nber.org/papers/w8466>
 - 10 Shakin, J. 2017. "Tax Expenditures." *Congressional Budget Office Blog*. <https://www.cbo.gov/publication/52493>
 - 11 Bhutta, N., Chang, A., Dettling, L., & Hsu, J. 2020. "Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances." *FEDS Notes*. <https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.htm>
 - 12 According to Morningstar analysis of the Survey of Consumer Finance, as of 2016, 7% of Black heads of households have investments outside of retirement plans, and 25% of European American families do. About 50% of working white households are contributing to a retirement plan, whereas 40% of Black households do.
 - 13 Zewde, N. 2020. "Universal Baby Bonds Reduce Black-White Wealth Inequality, Progressively Raise Net Worth of all Young Adults." *Rev. Black Political Economy*, Vol. 47, No. 1, P. 3. <https://journals.sagepub.com/doi/abs/10.1177/0034644619885321>

There is also research suggesting that such bond programs could encourage families to envision wider possibilities for their children. The most compelling evidence, studying demonstration projects on individual development accounts across 40 U.S. states, linked such accounts to a greater likelihood of children attaining higher education.¹⁴ Most other literature on behavioral benefits focuses on measuring contribution rates in savings programs with matching funds—a valuable strategy, but not one the baby bonds program considers.

In this paper, we expand on this literature to investigate an income-based design—the American Opportunity Accounts Act introduced in S.2231 in the 116th Congress¹⁵—to examine the extent to which such a design would reduce the racial wealth gap. We also adjust various features of the design to see the extent to which doing so would change the distribution of benefits. We examine the resources available to a family when an individual is 18, rather than looking at households headed by a young adult. We find that income-based designs also dramatically reduce the wealth gap, and the more focused they are on lower-income recipients, the more they address the gap. We also observe areas where baby bonds might still be inequitable and discuss options to address these issues. For example, participants cannot invest their amounts in retirement accounts or similar investments; siblings often receive different amounts; and baby bonds provide a smaller benefit to families that have struggled in the most-recent past if the contributions have a nonzero return.

American Opportunity Accounts Baby Bond Design

The American Opportunity Accounts baby bond program provides the most concrete details of any income-based plan. We use it to inform our analysis of such programs. The bill includes a provision to study and consider other ways of determining eligibility based on family wealth, total assets, and overall net worth, recognizing that income may not be the best proxy but it is the most readily available.

Under the proposal, the Treasury would fund accounts for children under 18, with an initial \$1,000 contribution made at birth or upon the implementation of the Act.¹⁶ Additional annual contributions would be based on family income. For household income of up to 100% of the poverty line, the annual contribution is \$2,000. From there, the amount declines to a \$250 annual contribution for those with household income up to 500% of the poverty line. Annual contributions ratchet down modestly for individuals whose household income is between these thresholds of more than 100% and less than 500% of the poverty line. For example, for kids with household income of 100% to 125% of the poverty line, annual contributions start at \$2,000 and come down to \$1,500. However, contributions stay at \$2,000 annually for families whose household income is less than 100% of the poverty line. The contributions, as well as the poverty line, would be adjusted for inflation.

14 Sherraden, M. 1991. "Assets and the Poor: A New American Welfare Policy." (New York: ME Sharpe).

15 Senate Bill 2231—American Opportunity Accounts Act, introduced July 2019. <https://www.congress.gov/bill/116th-congress/senate-bill/2231?q=%7B%22search%22%3A%5B%22american+opportunity+accounts%22%5D%7D&s=2&r=2>

16 Individuals under 18 at the time the bill was proposed (that is, birthdays after Dec. 31, 2003) with Social Security numbers would be eligible for annual contributions.

The Treasury would transfer account funds to the American Opportunity Fund. This fund would invest in specially created Treasury securities that match the interest rate on 30-year debt obligations of the U.S. government. (As of this review, the interest rate on the 30-year Treasury is about 1.4% nominal, likely a negative real rate of return).

Recipient children cannot withdraw from their accounts until their 18th birthday, with certain exceptions such as for higher education; the bill also permits increasing the eligibility age for certain types of distributions. Even after turning 18, participants must use their accounts for qualified expenses, including paying for their education, purchasing a home, and investing in any other financial assets or personal capital that “provides long-term gains to wages and wealth” as established via future regulations. As we will discuss, this wide range of possible activities could be simplified, which could enhance equity in the program and lead to more durable wealth-building. Distributions are also allowed for any reason after a participant turns 59.5 years of age.

The baby bonds should not discourage saving because the amounts in the American Opportunity Accounts would not count when applying for federal benefits, especially federal student aid. Everyone would receive an annual statement with the balance of the account and a projection of its value when the individual turns 18. The bill also directs the Treasury Department, along with the Financial Literacy and Education Commission, to develop programs to promote the financial capability of account holders.

Methodology and Data

Most of the literature evaluating the wealth gap uses the Survey of Consumer Finances or Current Population Survey, but this paper uses a different data source. For the longitudinal analysis in this paper, the best data set is the Panel Survey of Income Dynamics, which focuses especially on income and expenses over time. The PSID analysis reveals the extent to which a baby bonds program would increase wealth for lower-income families with children and the extent to which that benefit would aid Black families.

Summary Description of Data

Our analysis looks at individuals in the PSID aged 18 to 25 at the start of 2017, the most recent year for which survey data is available. By considering this seven-year window, rather than just those aged 18 in 2017, we expand our data pool significantly, allowing for a more representative sample, without expanding so far as to cover individuals raised in different eras. For the individuals, we consider data from their birth year through their 18th year when they would have been eligible for bond contributions.

We utilize the longitudinal weights of the individuals in the PSID to ensure proper weighting of the sample, although analyses with the cross-sectional weights bear very similar results. Because many

of the data points we use are monetary values, we adjust all dollar fields to match 2019 dollars. We additionally filter out individuals for whom insufficient data is available and infer data for small gaps and years in which the survey was not conducted.

Insufficient data is caused by two primary elements of the PSID design. Although the PSID tracks families over time, not all families are available for interviewing in every iteration. As a result, data for these individuals will be missing for the years in which they did not participate in the survey. Additionally, the PSID collected data annually from 1991 (the first relevant year for our analysis) through 1997, but it switched to biennially in 1999.

Our analysis relies on the longitudinal aspect of this data set to utilize income and poverty-level data for the individuals from their birth to age 18, as well as key data points in either their birth or 18th year, such as family wealth at age 18. In cases of gaps in income and poverty-level data, we extrapolate across the missing years whenever possible. In the case of data missing for specific years, we look one year forward or back, depending on the data point, but searching to years further away risks considering data that is less relevant to the individual as family circumstances may change.

Finally, we derive the race of the individuals in our sample. The PSID collects race data at the household level, surveying for the race(s) of the heads of households and their spouses, if applicable. As a result, we must assume that the race(s) of these figures is applicable to all members of the household, including the individuals we are examining that are born into the household. Additionally, the survey allows for at least two races to be reported for each head of household and spouse. In our analysis we consider all races reported for both the head of household and spouse in the year an individual is born when assigning race.

Specifics on Derived Data Points and Extrapolations of Collected Data Points

Race

An individual's race in our analysis is based on the racial data available for the head of household and the spouse, if applicable, during the participant's birth year. If this year was not surveyed (for example, 1998) or if the data is missing for the relevant year, we consider the data from the subsequent year. If neither of these are available, the individual is part of the group for which race data is missing (not reported). Considering all the race data available for the household, we base the assignments on the following logic:

- ▶ If the survey reports Hispanic or Latino, our analysis considers the individual Hispanic
- ▶ If the survey reports Black, our analysis considers the individual Black
- ▶ If the survey reports white, our analysis considers the individual white
- ▶ If the survey reports only other races (for example, Native American), our analysis considers the individual other

This assignment is hierarchical; therefore, our analysis considers biracial individuals to be part of the first race they report within this logic.

Income

To simulate the annual contribution to the baby bond account of individuals in our sample, we utilize the previous year's income and poverty-line data for the household. In the S.2231 baby bond program, the contribution at birth is same for everyone. The subsequent 17 contributions are based on how impoverished a family is, scaling so that larger contributions go to the most impoverished. If income data was missing at the beginning of this 17-year window, we utilize the first reported income data for the previous years (for example, if the first reported value was in the third year, we use this for the first and second years as well). If income data was missing at the end of the window, we carry the last reported value forward to the subsequent years (for example, if the last reported value was in the 16th year, we use this for the 17th year as well). If income data was missing in the middle of the window, including for years where data was not collected, we interpolate between the border values to create a smooth progression across the missing years. Finally, we exclude individuals for which income data was not available for all of this 17-year window.

Poverty Line

In addition to income data, the PSID includes the poverty threshold for each household based on the family's composition and the relevant year's U.S. Census Bureau's Current Population Reports. The combination of the income and poverty-line data for a given year allows us to determine what percent above or below poverty a family is to calculate the contribution to the baby bond for individuals in that household. If poverty-line data was missing at the beginning of the 17-year window we consider, we utilize the first reported poverty-line data for the previous years (for example, if the first reported value was in the second year, we use this for the first year as well). If poverty-line data was missing at the end of the window, we carry the last reported value forward to the subsequent years (for example, if the last reported value in the 15th year, we use this for the 16th and 17th years as well). If poverty-line data was missing in the middle of the window, including for years where data was not collected, we take the lower of the border values and carry this across all missing years. Because the poverty line for a family is partially determined by family composition, and for gaps we would not know when the composition changed, lower the higher poverty line ensures we do not overestimate the bond amount an individual would receive. Finally, we exclude individuals for which poverty-line data was not available for all of this 17-year window.

Wealth

While the contributions to the baby bond account are based on income, we examine the impact this has on the wealth of families when the individual with the baby bond reaches 18. The PSID includes imputed data points for total wealth and total wealth excluding home equity. These wealth estimates are the sum of the values reported for the following asset types:

- ▶ Farm or business
- ▶ Checking accounts, savings accounts, money market funds, certificates of deposit, government savings bond, and Treasury bills (excluding those in an IRA or employer-sponsored plan)
- ▶ Shares of stocks, mutual funds, and investment trusts (excluding those in an IRA or employer-sponsored plan)
- ▶ Vehicles (valuation accounts for any loans or other money owed)
- ▶ Private annuities or IRAs
- ▶ Real estate assets (excluding primary home)
- ▶ Other savings assets (for example, bond funds and cash value in a life insurance policy)

The PSID then reduces this total by the amount of nonmortgage debt reported. For the total wealth including home equity, the PSID adds the value of the home, excluding any reported mortgages.

Our analysis utilizes only the wealth data reported for the year in which an individual turns 18. If the PSID did not collect data that year, we use the wealth data reported in the previous year. Our analysis excludes individuals that did not have wealth data available in either the year they reach 17 or 18.

Number of Children in Household

We consider wealth in two ways: the total wealth of the household available to each child in the household, and wealth prorated by the number of children in the household at a given time. To do this, we must know the number of children in the household when the individuals in our sample turn 18. The PSID includes a variable for the number of minors in the household. If an individual reaches 18 in a year that the PSID did not collect data, we use the number reported for the previous year. If the number of minors reported was zero, we assume the household had one child that transitioned to a legal adult from a minor in that year. While the data point should reflect the number of minors at the start of the year, there appear to be some cases in which there is variation or errors in the reporting. For example, the individual identified by 1968 Interview Number 90 and Person Number 171 is 25 at the start of 2017. This individual is therefore 17 at the start of 2009 and in the family identified by 2009 Interview Number 8676. However, this family reports zero for the number of children in the household in 2009.

Baby Bond Calculation Methodology

To mimic the American Opportunity Accounts baby bond design, we first give all individuals \$1,000. We then compound this over 18 years with our real return rate assumption. Our base case uses 1% real return. However, we also simulate the effects with a 3% real return because the architects of the program hope to achieve this rate.¹⁷ We then calculate the value of the 17 subsequent annual contributions based on the individual's household income and poverty-line data for each year.¹⁸ Like for the initial contribution, we compound the annual contributions over the remaining years until the individual turns 18 with the same real return rate assumption. Ultimately, the baby bond account balance an individual would have access to at age 18 is the sum of these 18 compounded contributions.

Income-Based Baby Bonds Would Substantially Close the Racial Wealth Gap

As others have found, baby bonds have strong promise to help close the racial wealth gap by allowing children from lower-income families to accumulate substantial savings before turning 18. If the program described in S.2231 had been in place over the past 25 years, we estimate half of all kids in America would have a baby bond account balance of around \$13,700 at 18, while nearly one fourth would have an account balance of more than \$28,400, in real dollars, assuming real returns of 1% annually. While the program does not consider race, Black children would have a median account balance of \$27,500, Hispanics \$19,800, and whites just \$7,100. Of the individuals receiving the top 10% of benefits, ranging from \$36,200 to \$38,400, at least 31% would come from Black families and at least 13% from Hispanic families, with 33% coming from families for which race data is missing.¹⁹

As might be expected given the distribution of benefits, the racial wealth gap would have been narrowed by one fourth if every child that turned 18 in the U.S. recently had been enrolled in baby bonds, when examining total wealth including home equity. As Exhibit 1 illustrates, without baby bonds, there are sharp differences in total wealth among families by race. In fact, the median Black family in our sample with a child turning 18 has 94% less wealth than the median white family, and the median Hispanic family has 88% less wealth. When we introduce baby bonds, this gap narrows to 71% for Black families and 67% for Hispanic families.

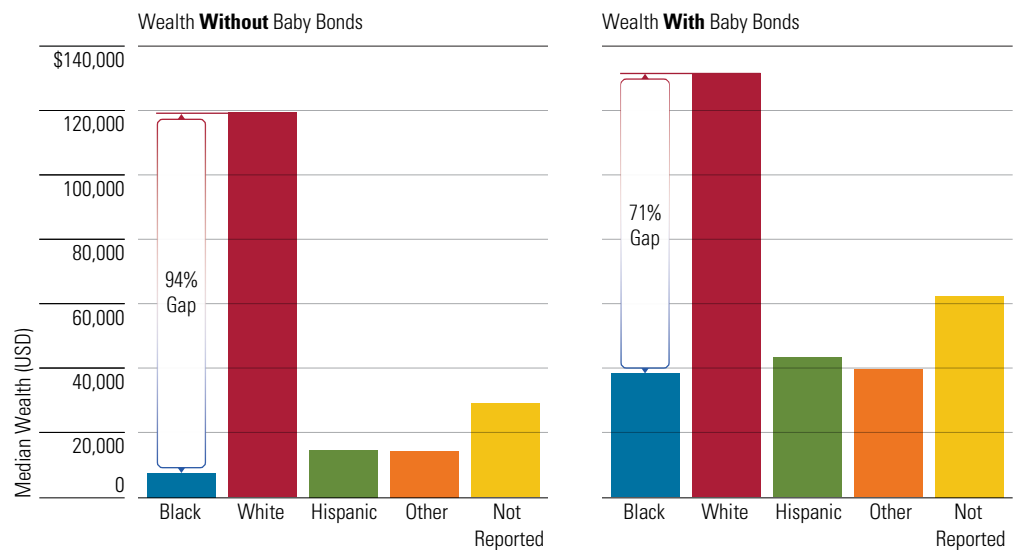
17 See, for example, <https://pressley.house.gov/media/press-releases/rep-pressley-senator-booker-reintroduce-baby-bonds-legislation-combat-wealth#:~:text=Press%20Release.%20WASHINGTON%20%E2%80%93%20Today%2C%20Congress-woman%20Ayanna%20Pressley,a%20seed%20savings%20account%20of%20%241%2C000%20at%20birth>. While the press release is silent on whether the numbers are nominal or real, they appear to be real as the amount in nominal dollars would be considerably larger as the legislation increases the bond contributions for inflation.

18 The bill includes a provision that contributions be rounded up to the nearest multiple of \$50, however we choose not to replicate this aspect in our analysis.

19 Our analysis includes a sample of 220 individuals for which race data was not available.

As noted above, we did not run a dynamic model. We did not make any assumptions as to whether families would save more or less after receiving baby bonds. We also did not make any assumptions of the cost increases of college. While these are important dynamics to consider, they are outside the scope of this paper. Further, we believe that to answer these questions, policymakers would need to experiment with baby bond programs.

Exhibit 1 Median Wealth by Race Including Home Equity With and Without Baby Bond Program for Families With Children That Just Reached Their 18th Birthday

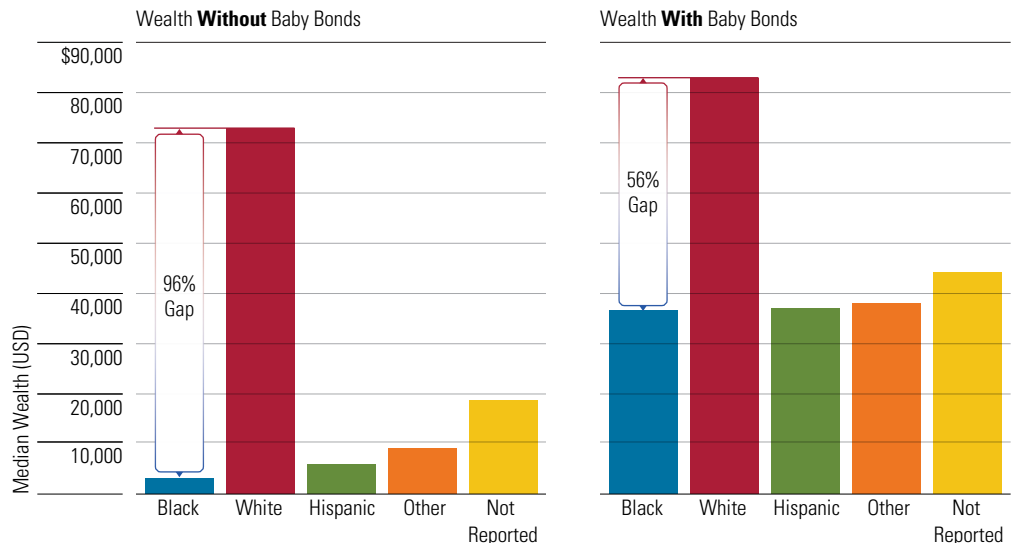


Source: Morningstar analysis using PSID simulation, described in the methodology.

Note: See our assumptions in the methodology paragraphs above. This model follows the S.2231 design, using a 1% real return.

In addition to family wealth, we also examine the wealth available per minor child in a household and the effect of baby bonds on closing the racial wealth gap based on this measure. Per child, baby bonds are even more effective at reducing the racial wealth gap, as illustrated in Exhibit 2. For this approach, we divide a family's wealth by the number of children in it including the child who has just turned 18. We exclude the other children's baby bonds from the household's wealth because these funds are not accessible until that child reaches 18. Without baby bonds, we calculate that Black families have 96% less in wealth per minor child than white families. With baby bonds, Black families have only 56% less in wealth per minor child. Similarly, without baby bonds, we calculate that Hispanic families have 92% less in wealth per minor child than white families. With baby bonds, they have only 55% less in wealth per minor child.

Exhibit 2 Median Wealth Per Minor Child Including Home Equity With and Without Baby Bond Program for Families With Children That Just Reached Their 18th Birthday

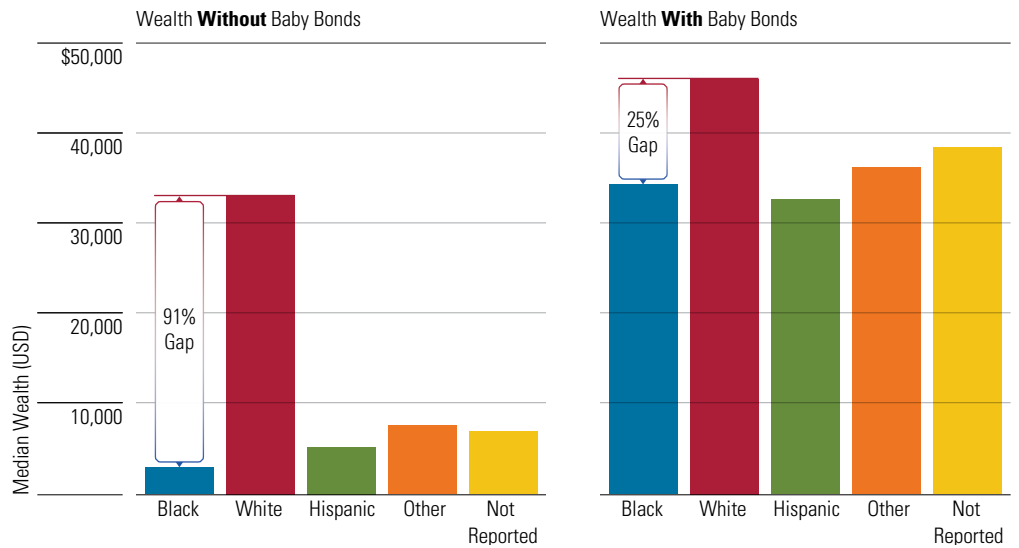


Source: Morningstar analysis using PSID simulation, described in the methodology.

Note: See our assumptions in the methodology paragraphs above. This model follows the S.2231 design, using a 1% real return.

As Exhibit 3 demonstrates, baby bonds make a substantially larger dent in the racial wealth gap if we exclude home equity. Considering all wealth except home equity, we find the median Black family in our sample with a child turning 18 has 91% less wealth than the median white family, and the median Hispanic family has 84% less wealth. When we introduce baby bonds, this gap shrinks to just 25% for Black families and 29% for Hispanic families. Essentially, white families have more wealth in home equity than Black families, so it diminishes the effects of baby bonds. While families can tap home equity for cash to pay for college, the process usually involves borrowing against a home or selling it. Therefore, we think that the baby bonds program narrowing the nonhousing wealth is a significant finding.

Exhibit 3 Median Wealth by Race Excluding Home Equity With and Without Baby Bond Program for Families With Children That Just Reached Their 18th Birthday



Source: Morningstar analysis using PSID simulation, described in the methodology.

Note: See our assumptions in the methodology paragraphs above. This model follows the S.2231 design, using a 1% real return.

Returns assumptions can make a major difference in the size of baby bond accounts and the extent to which these programs narrow the racial wealth gap. Treasury securities have yielded closer to 0% real returns in recent years. If they continue to stay at that level, rather than the 1% real yield we assume, these accounts would still help close the racial wealth gap but not by nearly as much. Exhibit 4 summarizes the difference in the maximum benefit based on different real rates of return. It also illustrates the variation the legislative program — as written — might create against a baseline of 3% real returns, which the architects of baby bonds hoped to achieve. As of this analysis, 30-year Treasury securities have negative real interest rates, based on likely long-term inflation.

Exhibit 4 Change in the Maximum Benefit of the Baby Bond Program in S.2231 at Different Real Returns

Real Rate of Return	Maximum Benefit	Decrease in Benefit From 3% Baseline
3%	\$46,531.30	—
2%	\$42,252.87	-9.19%
1%	\$38,425.64	-17.42%
0%	\$35,000.00	-24.78%

Source: Morningstar analysis.

A 0% real return would lead to modest declines in the effect of the baby bonds program on closing the racial wealth gap. Considering total wealth including home equity, we find it would narrow to 73% and 69%, respectively, for Black and Hispanic families, a slightly worse gap than 71% and 67%, respectively, for Black and Hispanic families using a 1% real return assumption. However, if baby bonds achieve a 3% real return, as its architects hope, then it would narrow the racial wealth gap to 66% for Black families and 64% for Hispanic families. However, achieving this rate of return would require the bond investments to either take risks or come with a government guarantee, which would increase the costs of the program. See the Appendix for full details on the extent to which a 3% real return would reduce the racial wealth gap.

Another policy option would be to adjust the program to direct more benefit to the lowest-income families, but doing so does not substantially narrow the racial wealth gap if we maintain the program's other features and phase the benefit out more rapidly. For example, if the baby bonds program were to stop at 300% of the poverty line rather than 500% while maintaining its other features, it would not reduce the racial wealth gap for median families any more than the original program design. The benefits, however, would concentrate much more on the lower end of the income and wealth distribution. Meanwhile, the program would be less generous for most children. Using the same 1% real rate of return with this policy design, we estimate half of all kids in America would turn 18 with a baby bond account balance of around \$10,600 rather than the \$13,700 they would have under the parameters of S.2231. In addition, one fourth of kids would have a bond account balance of \$26,800 rather than the \$28,400 they would have under the parameters of S.2231.

Policy Enhancements to Baby Bonds Programs Could Increase Equity

The S.2231 baby bonds bill as written is a good framework for helping children from lower-income families and addressing the racial wealth gap. Morningstar supports the concept of baby bonds in practice, but we are not endorsing any particular bill or program design. However, we believe that a successful baby bonds design should incorporate additional features to improve the long-term equity of outcomes.

Baby Bonds Should Include Supplemental Payments for Older Children

Baby bonds may often provide unequal benefits to siblings raised in the same household because contributions are based on the income and poverty line applicable during each child's 17 years as a minor. We hypothesize that baby bonds will more often provide higher benefits to younger siblings than firstborn children because the poverty line increases for families based on the number of dependents in the family. Therefore, when families have a second child, the bond contribution for both children will go up as the poverty line on which the bond is based increases, holding income constant. However, younger children have more time for this increased contribution to compound, assuming the bonds pay positive real returns. Furthermore, even once older children reach 18, they

may continue to be a dependent, meaning the higher bond contributions continue for younger siblings. The higher real rates of return are, the greater the gap between younger and older siblings.

Our sample includes an insufficient number of cases to draw decisive conclusions on the magnitude of this potential problem. This issue would be most significant for policymakers to address for families closest to the poverty line. For families well above the poverty line, the decline in contributions is such that the annual contribution to the accounts would only shift a little. However, for families close to the poverty line, if income is constant, a second child could move the family below the poverty line, ensuring the maximum contribution of \$2,000 into the younger child's account early with more years for this to compound. To mitigate this inequitable distribution of benefits, we recommend that the baby bond program include a requirement to study a top-up for children with significantly lower benefits than their siblings when they turn 18 to increase equity in the baby bond system.

Baby Bonds Should Be Easy to Use for Long-Term Investing

The S.2231 design does not provide an easy path to long-term investing after a child turns 18 and can gain access to the baby bond. While the legislation allows a new regulatory body to define acceptable uses that "provide long-term gains to wages and wealth" there is no defined way to invest. Indeed, the path of least resistance for an 18-year old that wishes to set aside money for retirement would simply be to leave some money in their baby bond account and withdraw it age 59.5. However, given that long an investment time horizon, it would make sense to take risks with the possibility of much greater returns by investing in a mix of bonds and stocks that gradually shifted to more bonds, as is common for most retirement savings.

We recommend that baby bond programs permit recipients to move money into Roth IRAs, which would allow this money to grow tax-free while giving investors access to a wide range of investments. Doing so would help convert baby bonds into a long-term wealth-building investment. The cost basis for Roth IRAs is typically available immediately with no penalty, which means that the Roth IRA could also serve as an emergency fund. However, to prevent baby bond account holders from using Roth IRAs as a backdoor way to take money out, we recommend limiting withdrawals until five years after the rollover. Baby bond account holders should also be able to invest assets in a taxable brokerage account if they so choose.

Furthermore, we believe that baby bond legislation should establish fiduciary protections for baby bond recipients to ensure they receive high-quality advice on investing their accounts upon attaining age 18. Baby bond participants, particularly those with the highest account balances, will come from families that are not accustomed to having investable assets. Protections are warranted to ensure that participants invest in low-cost, high-quality options. We believe the prohibited transactions embedded in the Employee Retirement Income Security Act, the prudential standard under ERISA, and the SEC investment adviser fiduciary duties of care and loyalty are appropriate frameworks to use when developing these protections.

Baby Bonds Could Be Integrated and Aligned With 529 College Savings Plans

Policymakers, particularly at the state level, could consider implementing an automatic enrollment process into direct-sold 529 college savings plans and expanding existing matching programs to align with baby bonds, so families would have both a baby bond account and a 529. As baby bonds are, by design, invested without risk, families could potentially take more investment risk in a 529, secure in the knowledge they would have a baby bond to fall back on when it came time to pay for college.

The purpose of 529s is to help families save for their children's higher education. These state-run programs allow college-savings investments to compound with no federal tax on gains or withdrawals if they pay for qualified education expenses, including college or trade school tuition and student loan payments. Many states also provide an additional tax benefit.

While 529 plans are powerful tools to help save for education, they do not contribute to alleviating wealth inequality. The tax incentives in these plans almost exclusively benefit affluent families.²⁰ Lower-income families are generally exempt from income tax or capital gains tax, so they see no benefit from this incentive. The state income tax breaks that some 529s offer are similarly regressive. Further, only 30% of college savers participate in 529s,²¹ mostly consisting of higher-income families.²²

Families, particularly lower-income ones, may underutilize 529 plans as college savings tools in part because they are not aware of the option. In a survey of 1,680 people without 529s, only 18% of those with annual incomes of \$35,000 or less had heard of 529 plans compared with 59% of those with incomes of \$100,000 and above.²³ Automatic enrollment into a state's 529 plan would bridge the information gap by introducing the plans to families as soon as their first child is born, leading to heightened awareness of 529 plans as an option for saving for college.

Automatic enrollment would also address a behavioral issue that keeps many families from optimizing the benefits of 529 plans. Morningstar research finds that investors optimize 529 plan benefits when they start early and stay invested, but the average college saver does not open a 529 account until the beneficiary is older than 7.²⁴ While automatic enrollment can't ensure that families will stay invested until their children reach college age, it would address the issue of waiting too long to open an account.

20 Reeves, R., & Joo, N. 2017. "A Tax Break for 'Dream Hoarders': What to Do About 529 College Savings Plans." (Brookings). <https://www.brookings.edu/research/a-tax-break-for-dream-hoarders-what-to-do-about-529-college-savings-plans/>

21 Sallie Mae. 2018. "How America Saves for College 2018: Sallie Mae's National Study of Parents with Children Under Age 18." https://www.salliemae.com/assets/about/who_we_are/HAS2018_Full_Report.pdf

22 College Board. 2015. "Trends in Student Aid 2015." <https://files.eric.ed.gov/fulltext/ED572541.pdf>

23 Sallie Mae. 2018. "How America Saves for College 2018: Sallie Mae's National Study of Parents with Children Under Age 18." https://www.salliemae.com/assets/about/who_we_are/HAS2018_Full_Report.pdf

24 Hume, M., & Giles, M. 2019. "When to Start Saving for College." *Morningstar.com*. <https://www.morningstar.com/articles/950278/the-cost-of-not-saving-early-for-college>

While research on the behavioral effects of matching and automatic enrollment programs is limited, there are programs that have experimented with automatic enrollment and income-based matching models. One such program is the SEED for Oklahoma Kids Child Development Account experiment. The program randomly selects newborn children to be enrolled in the state's college savings plan and deposits \$1,000 into the accounts. The accompanying matching program has a tiered system where contributions of up to \$250 are matched dollar for dollar for families with incomes below \$29,000 and \$0.50 per dollar for families with incomes between \$29,000 and \$44,000. As of 2014, 99.9% of the children that were automatically enrolled had a college savings account, compared with only 3% of the control group. The impact of this program on savings rates was limited, but there were no adverse effects on the savings behavior of families that were automatically enrolled compared with the control group.²⁵

Even with smaller seed deposits, there is evidence suggesting that having a college savings account helps instill the idea of pursuing higher education among children in lower-income families. A study from Washington University at St. Louis' Center for Social Development found that, after controlling for other factors, having such an account leads to increased college attendance.²⁶

Implementing Baby Bonds Would Come With Challenges, but They Are Very Promising

Baby bonds would not be a panacea, but they hold promise for addressing the racial wealth gap. We believe policymakers should explore ways to make them a reality. Regardless of the returns or program design we model, baby bonds reduced the racial wealth gap as measured in a variety of different ways. The challenge will be ensuring that as recipients gain access to the bonds at 18, they use the money to increase their likely long-term wages through education or their wealth through investments.

One policy challenge is to balance guardrails with flexibility while creating an off-ramp so the assets at age 18 can be invested in education, housing, or traditional investments. We believe our policy recommendations for baby bonds would help further reduce the racial wealth gap and increase equity within families.

Another issue policymakers need to wrestle with is whether they want this program to principally focus on equity among larger baby bond holders or whether they are willing to allow baby bond

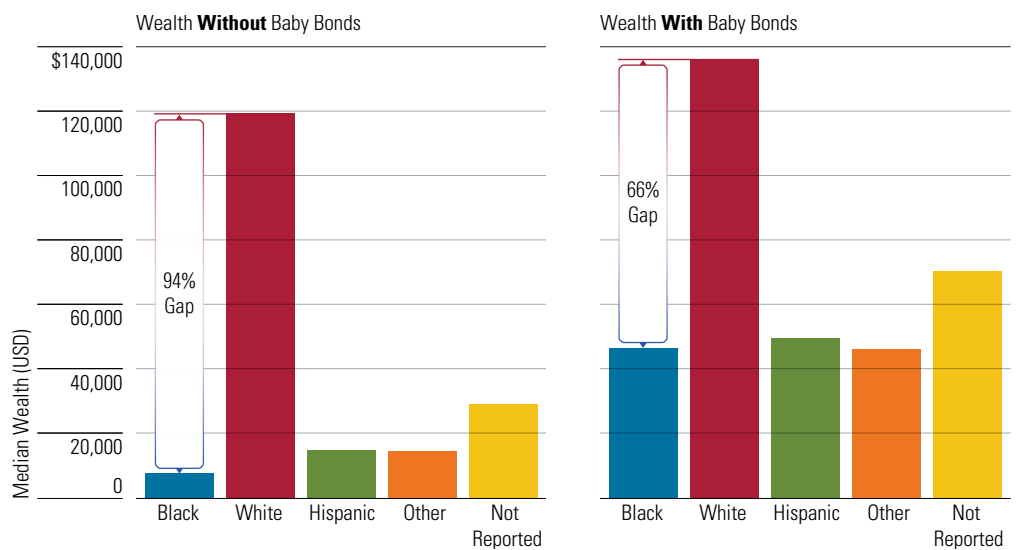
25 Beverly, S., Clancy, M., Huang, J., & Sherraden, M. 2015. "The SEED for Oklahoma Kids Child Development Account Experiment: Accounts, Assets, Earnings, and Savings." https://pdfs.semanticscholar.org/3aef/d71d5ae34ad8f0bd2eed1b68b8f9cb4b2bd8.pdf?_ga=2.123955596.724763007.1599685504-687042689.1598877553

26 Elliot, W., Beverly, S. 2011. "Staying on Course: The Effects of Savings and Assets on the College Progress of Young Adults." *American J. Education*, Vol. 117, No. 3, P. 343.

holders to bear risk to potentially get larger returns, thus potentially further reducing the racial gap. This is a normative question, and its answer depends on values. But, as illustrated in this paper (and in the Appendix), higher average returns reduce the wealth gap further. However, attaining those returns without a government subsidy (or implicit government subsidy) requires taking on risk that will in turn lead to variations in account balances in which children that reach age 18 in some years may have much larger balances than children from identical backgrounds who reach age 18 a few years before or after. If policymakers propose programs with such a design, third-party analysis should deploy stochastic models to illustrate the trade-offs of assuming more risk than baby bond framers currently anticipate.

Appendix: Median Wealth With a 3% Real Return

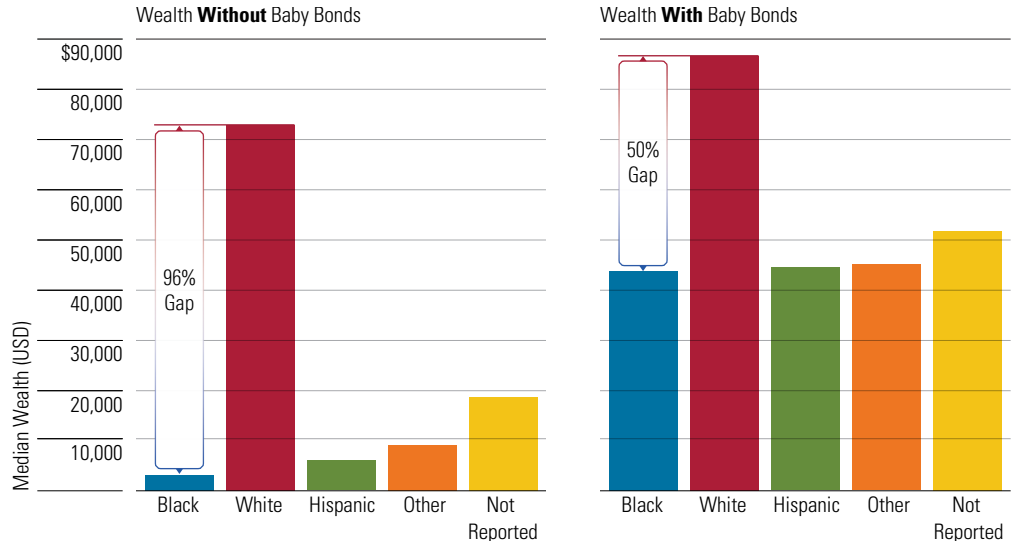
Exhibit 5 Median Wealth by Race Including Home Equity With and Without Baby Bond Program for Families With Children That Just Reached Their 18th Birthday



Source: Morningstar analysis using PSID simulation, described in the methodology.

Note: See our assumptions in the methodology paragraphs above. This model follows the S.2231 design, using a 3% real return.

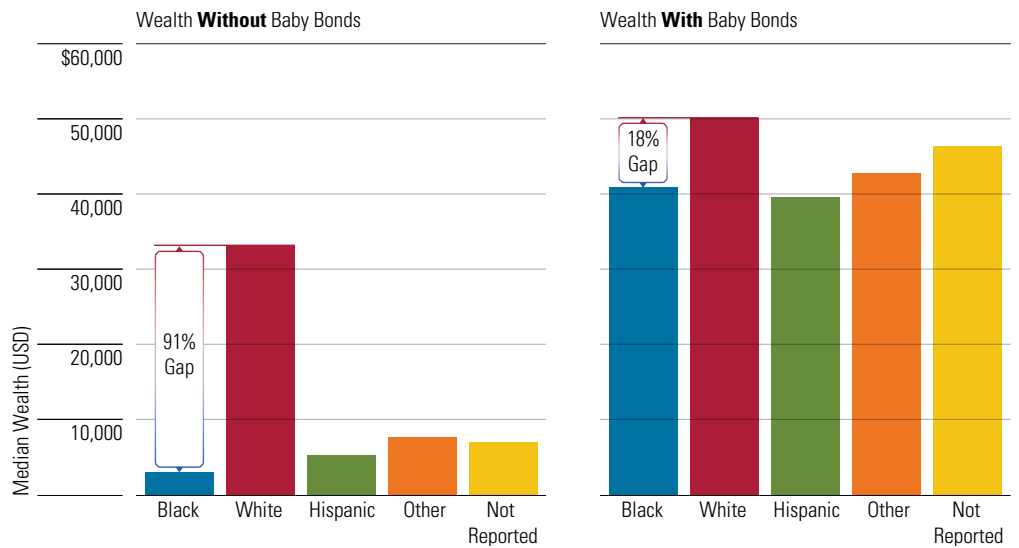
Exhibit 6 Median Wealth Per Minor Child Including Home Equity With and Without Baby Bond Program for Families With Children That Just Reached Their 18th Birthday



Source: Morningstar analysis using PSID simulation, described in the methodology.

Note: See our assumptions in the methodology paragraphs above. This model follows the S.2231 design, using a 3% real return.

Exhibit 7 Median Wealth by Race Excluding Home Equity With and Without Baby Bond Program for Families With Children That Just Reached Their 18th Birthday



Source: Morningstar analysis using PSID simulation, described in the methodology.

Note: See our assumptions in the methodology paragraphs above. This model follows the S.2231 design, using a 3% real return.

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For More Information

Aron Szapiro
Head of Policy Research
+1 312 696-6074
aron.szapiro@morningstar.com



22 West Washington Street
Chicago, IL 60602

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