WHAT IS THE RISK TO OASI BENEFITS FROM UNPAID STUDENT LOANS?

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Abstract

While the magnitude of student debt held by those over 65 is not large, both the share of households holding such debt and the mean amount have risen rapidly since 1990. Defaults on student loans have similarly been rising among older debt holders. One distinct feature of federal student loans is that federal payments to individuals, including OASI benefits, can be withheld by Treasury to pay for delinquent loans. The rising trend in default rates, in combination with potential benefit offsets for borrowers, may undermine the economic security of retirees. Using the 2010-2019 *Surveys of Consumer Finances*, this paper estimates how much student debt is held by OASI beneficiaries, evaluates the financial consequences of loan delinquency, informs on future trends by examining future beneficiaries, and estimates the impact of the Biden administration's student debt relief plan.

The paper found that:

- Less than 2 percent of OASI beneficiaries hold federal student debt, but future beneficiaries are much more likely to have such debt as they approach retirement.
- Almost a quarter of student loan borrowers in old age are delinquent and potentially face a 4-7 percent decline in household income due to benefit offsets.
- Black households are more likely to be student loan borrowers and have higher delinquency rates.

The policy implications of the findings are:

- While student loans are rare among current OASI beneficiaries, they are likely to become a bigger problem for future beneficiaries.
- Concentration of delinquency among borrowers in racial minority groups suggests that student loan debt may become a meaningful source of racial inequality for OASI beneficiaries.
- The administration's student debt relief plan will substantially reduce student debt and likely narrow existing racial gaps.

Introduction

Student debt has been rising dramatically over the past few decades, including among older adults. While the magnitude of student debt held by those over 65 is not large, both the share holding such debt and the mean amount of debt have grown rapidly since 1990. Defaults on student loans have similarly been rising among older debt holders, particularly for loans for education at Minority Serving Institutions. One distinct feature of federal student loans is that federal payments, including OASI benefits, can be withheld by Treasury to pay for delinquent loans. Despite heated policy debates regarding the federal student loan program, much remains unknown about the effect of student debt and default on the retirement security of current and future Social Security beneficiaries.[1]

Despite its relatively small size, student loan debt is unusual in a number of respects that make it more burdensome than other types of debt. Interest rates for parental student loans are high relative to secured debt.[2] More importantly, the potential benefits withheld in the event of student loan delinquency can undermine the retirement security of current and future retirees and, thus, can be of primary concern to the Social Security Administration (SSA) and other government agencies. In 2013, the Government Accountability Office (GAO) found that 33,000 Old-Age and Survivors Insurance (OASI) beneficiaries over the age of 65 had their benefits withheld to pay for delinquent student loans.[3] The amount of benefits withheld on average was $130 per month; while modest for the average household, this sum is meaningful for lower-income households for whom Social Security is the main source of retirement income.[4] Such withholding may impose disproportionate harm on disadvantaged groups, since poor repayment of student loans is disproportionally concentrated among low-income borrowers and loans incurred at Minority Serving Institutions.[5]

In light of concerning trends in student debt among older households and potential benefit offsets associated with delinquency, this paper provides up-to-date numbers on the

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[1] Butrica and Karamcheva (2020) show that rising student debt among those approaching retirement impacts saving and retirement decisions.

[2] In 2018, parental loans had an interest rate of 7.60 percent (Looney and Lee 2018), compared to 4.54 percent for mortgages (Freddie Mac 2021).

[3] GAO (2014, 2016).

[4] And while lower-income households are less likely to have gone to college than their higher-income counterparts, as a group they still hold considerable student debt. In 2019, households (of all ages) in the bottom quintile of income had an average of $25,000 in student debt.

[5] Looney and Lee (2018).

composition of older households holding student debt, with a focus on the risk of having OASI benefits withheld. The analysis adds to the discussion of student debt by using data from the *Survey of Consumer Finances* (SCF), which allows for descriptive and regression analysis featuring the sociodemographic characteristics of debtors. The results inform on how the current student debt system would impact the economic security of current and future OASI beneficiaries.

Various policy changes have been proposed to grapple with the issue of rising student debt. In late August, 2022, the Biden administration announced a debt relief plan that will forgive up to $20,000 of student debt for current borrowers, which will completely eliminate student debt for many. Given the intense policy interest on this topic, this paper conducts a preliminary analysis to examine the policy's impact on student loan holding, balance, delinquency, and existing racial disparities in the context of the retirement security of future Social Security beneficiaries.

The discussion proceeds as follows. The next section gives background on how older Americans can end up with student debt, the rules surrounding such debt, the Biden administration debt relief plan, and a summary of what research to date finds on the topic. The third section describes the data for the current analysis and details the empirical methodology. The fourth section describes the levels of student debt borrowing among older Americans and their younger counterparts and quantifies the financial consequences of defaults. The final section concludes that, while these consequences remain relatively small among current OASI beneficiaries, such debt is concentrated among disadvantaged groups and its impact may become more damaging to future beneficiaries. As expected, the administration's debt relief plan will substantially reduce student loan debt for all, while benefiting Black and Hispanic borrowers the most.

Background

This section first describes federal student loans programs and explains the sources of student debt among older Americans. It then shows the trends in student debt holding and delinquency, followed by background information on rules surrounding student loan delinquency that can lead to offsets of Social Security benefits. Lastly, this section summarizes the Biden administration debt relief plan and its expected impact on borrowers.

Sources of Student Debt among Older Americans

The Higher Education Act of 1965 and the Higher Education Amendments of 1992 established the modern-day student loan system, where students are able to receive subsidized and unsubsidized loans that are guaranteed by the federal government either directly from the U.S. Department of Education in the Direct Loan program or from private lenders. Eligible parents can also obtain the Parent PLUS loan in the Direct Loan program to pay towards their children's tuition. Following the student loan reform in the Health Care and Education Reconciliation Act of 2010, all new federal student loans are required to be offered through the Direct Loan program. Since then, private lenders have started offering student loans that are independent of the federal government.

Thus, older Americans hold student loans through multiple pathways. They could still be repaying student loans for their own college education or mid- or late-career training; indeed, student loan terms can range up to 30 years. Alternatively, they may hold loans taken out for the education of their children or grandchildren through Parent PLUS loans. In addition, they may have private student loans by co-signing their children's private student loan, where the responsibility to make repayments is shared equally with the student.

This paper focuses on federal student loans for two reasons. First and foremost, private student loans do not directly lead to withheld income from Social Security. Second, due to their short history and limited access, private student loans remain less prevalent and account for less than 8 percent of all student loans borrowed as of 2021.[6]

Recent Trends in Student Debt and Delinquency

It is well documented that student debt has grown in recent decades.[7] While not holding as much student debt as their younger counterparts, more older Americans have outstanding student loans near and in retirement in recent years (see Figure 1). Furthermore, the rates of increase in the number of older borrowers and the amount of their debt have far outpaced

[6] Amir et al. (2022). Private student loans may be also less accessible to borrowers. Because they are not backed by the federal government, private lenders may require an established credit record. Private student loans may have lower borrowing costs than federal student loans, but only for selected households with strong financial profiles and high credit scores; other borrowers would obtain lower costs through federal loans.
[7] For examples, see Butrica and Karamcheva (2020) and GAO (2014, 2016).

younger borrowers. For example, median education loans for households with a head ages 65-74 rose from $2,500 in 2001 to $14,000 in 2019.[8]

The literature also finds steadily increasing delinquency rates among borrowers. Delinquency rates on student loans reached the highest out of all types of consumer debt between 2012 and early 2020.[9]

In addition, racial disparities in student loans are large and growing, as households in black-majority zip codes have the highest student loan balances and experience the fastest growth in balances.[10] Delinquency on student loans is also concentrated among lower-income borrowers, and among loans issued for education from Minority Serving Institutions.[11]

One feature of federal student loans that stands out amid the rising trend and inequity of delinquency rates is that federal payments, including OASI benefits, can be garnished to offset delinquent student loans. As the proportion of student loan borrowers among older households grows, student loans may take a more prominent role in households' retirement security. Since households in racial and ethnic minority groups are more likely to hold student debt and be delinquent, student loans may also have disproportionate effects on disadvantaged groups, leading to larger income gaps in retirement.

Student Loan Delinquency and Social Security Offsets

The U.S. Department of Education administers federal student loans and tracks loan repayments. In efforts known as administrative offsets, the Department of Education may coordinate with Treasury to withhold a portion of federal payments to delinquent student loan borrowers, including federal income tax refunds or Social Security retirement or disability benefits. The benefit offset process is typically started by the Department of Education on loans that have been delinquent for 425 days. The amount of allowable offsets is the lesser of 15 percent of the total benefit or the amount by which the benefit exceeds $750 per month.

Unsurprisingly, the incidence of benefit offsets grew rapidly as the share of student debt borrowing and delinquency rose. A 2016 GAO report documents that, from 2002-2015, the

[8] Both in 2019 dollars (Federal Reserve Board of Governors 2019).
[9] Delinquency rates fell dramatically since March 2020. The main reason is the student loan payment pause that started in March 2020 and is scheduled to end at the end of 2022.
[10] Haughwout et al. (2019).
[11] Looney and Lee (2018).

number of borrowers of any age whose Social Security benefits were offset grew from 36,000 to 173,000, an almost 400-percent increase. The increase in the number of borrowers 65 and over with offsets was more pronounced – about 540 percent.

In light of recent trends in student debt holding, delinquency, and benefit offsets, this paper examines both the prevalence of student loan debt and the financial consequences of delinquency among older households who are currently receiving Social Security OASI benefits, and informs on future trends by repeating the analysis on a younger sample of future beneficiaries.

Biden Administration's Student Debt Relief Plan

The alarming upward trends in student loan debt and delinquency have sparked policy interests in student loan relief. Most recently, on August 24, 2022, the Biden administration announced a debt forgiveness plan that completely eliminates student debt for many borrowers. Specifically, the plan forgives $10,000 of student loan debt for loan holders earning less than $125,000 and married couples earning less than $250,000 in annual income. Pell Grant recipients, who received a government scholarship while in school due to having significant financial need, can obtain another $10,000 of student debt forgiveness.[12] The debt relief is expected to affect up to 43 million borrowers, including cancelling the full remaining balance for roughly 20 million borrowers.

In addition to direct debt relief among current borrowers, the plan also includes major reforms on the existing income-driven repayment plan.[13] Borrowers enrolled in the new income-driven repayment plan will have their maximum monthly payments cut in half and receive full loan balance forgiveness after 10 years rather than 20 years.

While reducing debt for all, the relief plan aims to narrow the racial wealth gap by targeting student debt that is burdening many borrowers in racial minority groups. The direct debt forgiveness can alleviate racial disparities in student debt holding and balances due to three reasons: 1) Black and Hispanic households are more likely to borrow in order to obtain higher education; 2) a smaller share of minority students borrow for advanced degrees, which may lead

[12] According to the White House, more than 60 percent of student loan borrowers are Pell Grant recipients, the vast majority of whom come from families with less than $60,000 in annual income.

[13] The plan also includes improvements on the Public Service Loan Forgiveness program that will expand eligibility of full forgiveness to those who have not yet served 10 years in public service.

to lower income and a greater chance of becoming eligible under the income requirements; and 3) minority students are more likely than their White peers to receive a Pell Grant.[14] However, Black borrowers are well documented to have higher remaining debt balances, which may make complete debt forgiveness less likely for them.[15]

The direct debt forgiveness is expected to cut down delinquency rates by eliminating debt for delinquent borrowers with small enough balances. Those with remaining student debt also face lower balances and reduced monthly payments, which they are more likely to be able to afford.

Unsurprisingly, preliminary studies on the debt relief plan all show substantial reductions in student debt holding following debt forgiveness.[16] Early evidence also points towards narrowing wealth gaps as a result of direct debt forgiveness. A New York Fed report found that, after accounting for the additional $10,000 of debt forgiveness for Pell Grant recipients, low-income neighborhoods are expected to experience the largest decrease in student loan holding, balances, and delinquent debt balances.[17] One caveat of current research, including this paper, is that it cannot directly measure the impact of planned reforms to income-driven repayment.

Data and Methodology

This paper draws from the Federal Reserve Board's SCF, which is conducted once every 3 years and gathers various economic and financial data at the household level, including detailed information on student loans. The SCF offers the most comprehensive overview of household characteristics of student loan borrowers, an advantage over administrative data. Given the relatively small proportion of older respondents with student loans, the sample for this analysis pools respondents from four waves of the SCF, spanning the post-Great-Recession period 2010-2019.

The analysis has three parts. The first focuses on the characteristics of OASI beneficiaries who hold student debt. OASI beneficiaries in the SCF are defined as households with at least a head or spouse over age 62 who receive retirement benefits from Social Security.

[14] Haughwout et al. (2019). Black undergraduate students are twice as likely to receive Pell Grants as White students, according to NCES (2019).
[15] For example, see Haughwout et al. (2019) and Scott-Clayton and Li (2016).
[16] Bennett, King, and Klee (2022), Goss, Mangrum, and Scally (2022).
[17] Goss, Mangrum, and Scally (2022).

The final sample size for this part of the analysis is 5,395 households. The second part considers younger adults, ages 35-61, who will likely eventually become OASI beneficiaries. The final sample size for this second analysis is 13,111. Both parts of the analysis therefore consider the current magnitude of the burden of student debt on OASI beneficiaries and inform regarding the future trajectory of this burden. The third part examines the potential impact of the Biden administration debt forgiveness plan among future beneficiaries.

The first part of the analysis provides an up-to-date assessment of the state of student debt among OASI beneficiaries. The SCF has information on debt holding status, remaining student loan balance, loan terms, and payment status. The analysis focuses on having a federal student loan, which, as noted, is much more prevalent than private loans and has the potential consequence of OASI benefit offsets. Descriptive statistics on educational loans are calculated, including the share of beneficiaries holding such debt; the mean balance of the debt; and quantiles of the debt, with a focus on the beneficiaries with large outstanding student debts. These debts are also characterized by whether they were incurred for the education of the respondent or a relative.[18]

In addition to documenting descriptive information on debt holding, the analysis evaluates the negative effect of failing to repay on retirement security by first determining the delinquency status of borrowers. The SCF does not have information on loan default, which is defined as being delinquent for an extended period of time and results in offsets of Social Security benefits.[19] This paper focuses on delinquency instead, since it is an intermediate step that may eventually lead to default and offsets.[20] Loan holders are considered delinquent if they

[18] The 2016 and 2019 SCF provide information on the relationship of the student to the household head. However, the SCF accounts for all student loan debt held by household members and does not specify who is responsible for repaying the student debt. It is possible that children with their own student loans live with their parents, resulting in an overestimation of student loan debt for their parents. In order to eliminate the impact of adult children, we repeat our analysis on a subsample of households with no more than two members. While the proportion of households with student loan debt decreased in the subsample, the average student loan balance among loan holders remains higher than $40,000 and the positive time trend we observe with the full sample persists. Delinquency rates also remain similar to those in the full sample. It is worth noting that delinquent OASI beneficiaries not living with children or relatives are more vulnerable to benefit offsets, as they cannot rely on income from other household members.

[19] After the loan has been delinquent for 425 days (approximately 14 months), the Department of Education determines whether to take actions intended to recover the money it is owed.

[20] GAO (2014) and GAO (2016) use administrative data from Fiscal Service's Treasury Offset Program linked to data on borrowers' student loans from the Department of Education's National Student Loan Data System (NSLDS) and borrowers' Social Security benefits from SSA's Master Beneficiary Record and Disability Control File between 2001 and 2015. The administrative data, however, do not provide detailed information on household demographics and financials.

are currently not making payments, excluding cases where they are not responsible for making payments due to in-school deferment or economic hardship deferment.[21] Delinquent loan borrowers may later pay to get their account current or use forbearance as tools to avoid default.[22] Hence, the analysis shows an upper bound of the magnitude of potential threats the student loan issue poses to OASI beneficiaries' retirement security.

The paper uses an OLS regression to estimate the household characteristics associated with delinquency, with a focus on race and ethnicity in order to assess disparate harms that the current system may impose on minority OASI beneficiaries.[23]

The final step in part one of the analysis quantifies the possible financial consequence of offsets among delinquent student loan borrowers. The analysis draws from the amount of Social Security payments in the SCF and the federal poverty line to calculate the amount of benefits at risk of being withheld and whether the loss of income is liable to push low-income beneficiaries into poverty.

Since the SCF does not differentiate student loans held by the household head and those held by the spouse (in married households), the analysis again evaluates the upper bound of the financial consequences of delinquency. In this case, the upper bound is found by reporting the maximum benefits at risk of being withheld in case of two beneficiaries in the same household. Benefits at-risk are compared, for each respondent, to total household income. To reflect households for whom garnishing of benefits would substantially impact their finances, the analysis creates an indicator that equals one if the offsetting of benefits would push the household into poverty.

To shed light on trends of student loans for future beneficiaries, the second part of the analysis uses a younger sample and repeats the first part of the analysis. The methodology largely stays the same, except that the analysis projects Social Security benefits based on current

[21] The SCF had a major questionnaire update on student loans between 2013 and 2016. Our definition of delinquency remains relatively consistent over time. In each wave, we consider those not making payments who have deferred payments as *not* delinquent. The 2016-2019 data only allow for identifying in-school deferment and economic hardship deferment. Student loan holders may qualify for other types of deferment such as military service and post-active duty student deferment and unemployment deferment, which are outside the scope of this paper's analysis.
[22] Cunningham and Kienzl (2011) find that more than 26 percent of student loan holders became delinquent but did not default. Most of these borrowers used deferment or forbearance as tools to avoid default, while a smaller proportion made payments to resolve the delinquency.
[23] Poor repayment of student loans is disproportionally concentrated among loans incurred at Historically Black Colleges and Universities and Hispanic Serving Institutions (Looney and Lee 2018).

earnings instead of using self-reported benefits. The benefit projections largely follow the Social Security quick calculator on the SSA website, under the assumption that all current workers will be eligible for OASI benefits.[24] As a result, the financial consequences of student loan delinquency for future beneficiaries, evaluated using projected Social Security benefits, provide a glimpse into the potential aftermath of student debt holding as current loan holders age.

The third part of the analysis provides a preliminary evaluation of the latest (and largest) policy change on student debt, i.e. the Biden administration's debt forgiveness plan. Focusing on the impact of the direct debt relief among current borrowers, the analysis conducts a thought experiment regarding what would happen to student loan holding, balances, and delinquency rates if the debt relief were available to student loan borrowers between 2010 and 2019. $10,000 is deducted from the remaining student loan balance for all current borrowers with income below the eligibility threshold in our sample.[25]

The debt relief plan also promises an additional $10,000 of debt forgiveness to Pell Grant recipients, the majority of whom are minority students. The analysis imputes Pell Grant status for student loan borrowers in the sample – they are considered Pell Grant recipients if they have below-median household income.[26] Current OASI beneficiaries have lower household income in retirement, which may not be representative of income when the student loans were taken out. For this reason, the analysis in this section focuses on future beneficiaries.

Following this simplified approach to imputing Pell Grant status, we estimate that about 56 percent of borrowers among future beneficiaries are Pell Grant recipients, which is on par with estimates from other sources.[27] The share of Whites among Pell Grant recipients who are student borrowers is slightly higher, while the share of Hispanics is lower compared to numbers

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[24] Similar to the quick calculator, the projections assume a 2-percent real wage growth rate, and that real wage growth stops at age 55. Further, workers are assumed to stop working at age 61 and start claiming at the Full Retirement Age. The Annual Wage Index, which is used to calculate the Contribution and Benefit Base and Primary Insurance Amount formula bend points, is assumed to grow at 3.75 percent beyond 2030.

[25] Specifically, single-head households with income below $125,000 in 2020 dollars and married couples with income below $250,000 are considered to be eligible for debt forgiveness.

[26] Pell Grant eligibility is determined by the Department of Education after reviewing the student's Free Application for Federal Student Aid (FAFSA). Specifically, a student's eligibility depends on having a low Expected Family Contribution (EFC), which is calculated using a formula based on a number of factors including the family's taxed and untaxed income, assets, and benefits, and family size.

[27] White House (2022) and Goss, Mangrum, and Scally (2022) both estimate Pell Grant rates of 60 percent among borrowers.

published by the National Center for Education Statistics.[28] Consequently, our approach to imputing Pell Grant status may lead to underestimating policy impacts on narrowing racial gaps.

The debt forgiveness plan is modeled to reduce student loan delinquency because those with completely eliminated student debt can no longer be considered delinquent. This approach can lead to underestimates of policy impacts for two reasons. First, it is possible that borrowers with lower balances following the debt forgiveness can afford to make the reduced payments now, thus decreasing delinquency rates. Second, the analysis omits possible decreases in delinquency rates following the reform of the income-driven repayment policy.

Another limitation of our approach is that it does not account for households paying off student debt between when they were surveyed and the year 2022, so it does not fully reflect the landscape of student debt immediately after the debt relief plan was implemented. However, the simplicity of this methodology allows for a timely policy analysis. The bottom line is that this paper provides conservative estimates on how the direct debt forgiveness affects levels and racial gaps in student debt.

Results and Discussion

This paper sets out to answer three questions for current and future OASI beneficiaries: 1) Which groups hold student debt and how much do they owe? 2) How many of them became delinquent on their debt and how much might be garnished from their benefits? and 3) What are the financial consequences of such benefit-withholding? Two populations are considered for each of these questions, in parallel: current OASI beneficiaries and younger adults. In light of recent policy changes, the last part of the analysis focuses on the potential impact of the Biden administration's direct debt relief on current borrowers among future beneficiaries.

Results presented in this section show that only a small proportion of current OASI beneficiaries are student loan borrowers and even fewer beneficiaries face potential benefit offsets that may hinder their retirement security. However, both student debt holding and delinquency are concentrated among financially vulnerable households – those in racial minority groups and with lower levels of wealth. Looking ahead, without policy interventions, a greater share of future beneficiaries will be at risk of falling behind on student loan repayment amid rapidly rising student debt. The debt relief plan will substantially decrease student debt holding

[28] See Table A6.

and balances. Black and Hispanic borrowers benefit the most from the reduction in student debt holding.

Characteristics of Student Loan Borrowers

The analysis begins by examining the characteristics of student loans held by current and future OASI beneficiaries. Only a small proportion, less than two percent, of current OASI beneficiary households have federal student loans, compared to almost 15 percent among future beneficiaries (see Table 1).

In terms of the size of these loans, an average student loan borrower originally took out around $46,000 and still holds more than $30,000 in debt among current beneficiaries. The future beneficiary sample has slightly higher origination and remaining balances. Appendix Table A2, drawing from the latest two SCF waves, shows that student loans held by current beneficiaries are predominantly for the purpose of their own or their spouse's education.

Descriptive statistics comparing student loan borrowers and those without student loans show that, among current beneficiaries, student loan borrowers are younger, more likely to be married, and more likely to be in racial and ethnic minority groups (see Table 2).[29] Perhaps unsurprisingly, due to the unique nature of student loans, borrowers are more likely to have a college degree. Despite the higher educational attainment, however, student loan borrowers who are current beneficiaries do not receive higher household income and also fall short in household wealth. That older student loan borrowers have limited retirement wealth is particularly concerning, as they have less resources to tap in the event of loan default and the ensuing offsets of Social Security benefits. The economic disadvantage of student loan borrowers is even more apparent in the future beneficiary sample, who not only own less wealth but also receive lower household income.[30]

A regression model of having any student loans, pooling all age groups together, paints a similar picture – student loan borrowing is associated with young age, being married, racial and ethnic minority groups, and college degrees (see Table 3). The magnitude of the Black coefficient is large – even when holding everything else equal, Black households are 6.9 percent

[29] In relation to the group's younger average age, student loan borrowers are almost twice as likely to be under the Full Retirement Age, a cutoff for early claiming, than other beneficiaries (25 percent vs. 13.6 percent).
[30] Student loan borrowers among current beneficiaries do not earn less household income. One explanation is that they are younger and more likely to have a household member (themselves or their spouse) who is still working.

more likely to have student debt, compared to a 10.6-percent sample mean. Hispanic ethnicity, however, is not associated with a greater chance of having student debt, holding all else equal. As expected, the likelihood of having student loans decreases with household income and net worth. The positive linear time trend in the regression model confirms the upward trend in student debt observed in Figure 1, suggesting that the rise in student debt cannot be fully explained by changes in demographic composition or household finances.

Table 4 shows the results of a regression of remaining loan balance on various characteristics, conditional on having a loan. Despite strong correlations between student loan borrowing and age as well as race and ethnicity, Black and younger households do not have higher remaining balances in student loans, conditional on being a borrower. However, student loan borrowers have increasingly large balances to repay over time, as evidenced by the positive linear time trend. The persistent upward trend in the prevalence and levels of student debt over time indicates the growing significance of student loans on the household finances of future OASI beneficiaries.

Delinquency and Social Security Benefit Offsets

The analysis of student debt holding has established that, while student loan borrowing is rare among older Americans, it is concentrated among more disadvantaged households and might become a bigger issue given its prevalence among future beneficiaries. Nevertheless, having student loans, or even large outstanding balances, does not necessarily erode the retirement security of current and future beneficiaries, as long as they can afford to pay off the debt. Student loan delinquency, however, puts households on a path to default, which can eventually lead to their Social Security benefits being garnished.

Table 5 first reports the share of student loan borrowers currently not making payments, our chosen measure of delinquency, among current (Panel A) and future (Panel B) beneficiaries and by race.[31] Almost a quarter of student loan borrowers who are OASI beneficiaries are not paying off their debt. Future beneficiaries are more likely to have children still enrolled in school, consequently qualifying for in-school deferment and not having to make payments. As

[31] Four alternative definitions of delinquency are presented in Appendix Table A3. Not currently making payments on student loans is the most straightforward definition out of the five we considered. Note that the first two definitions of delinquency are only available in the 2016-2019 SCF.

expected, the proportion of delinquent borrowers is lower among future beneficiaries but they still constitute 15 percent of younger student loan borrowers.[32]

Delinquent borrowers also have larger remaining balances than the average borrower. Black borrowers have slightly higher delinquency rates on student loans among current beneficiaries. They are, however, almost twice as likely as whites to be delinquent in the future beneficiary sample. In both age groups, delinquent Black households are also found to be deeper in debt, suggesting that it will take them longer to pay off debt through benefit offsets if those materialize.

To evaluate the financial consequences of delinquency, the analysis first summarizes the average annual Social Security benefits at-risk, calculated by multiplying 12 months and the lesser of 15 percent of the monthly benefit, or the difference between the total monthly benefit and $750.[33] For an average borrower in delinquency, the financial consequences of benefits withheld appear to be relatively small. The maximum amount of annual Social Security benefits withheld is around $2,000 for delinquent current beneficiaries, which represents 6 percent of their household income (see Table 5). The amount of benefit offsets among future beneficiaries who are delinquent on student loans, calculated using projected Social Security benefits, is more than $2,500, but also makes up a small share of household income. Correspondingly, very few student loan borrowers are pushed into poverty because they are delinquent and may have Social Security benefits withheld (see Table 6).

However, for households that are just making ends meet, even a small decline in income can have significant consequences. Putting these numbers into context, the amount of withheld benefits can roughly pay off the average household credit card balance in 2019.[34] Furthermore, benefit offsets may also be imposed on more than 2 percent of OASI beneficiaries who are already in poverty, taking a toll on their low household income.

The analysis has established two findings regarding student loan delinquency using pooled samples: 1) a large racial gap in delinquency exists among borrowers who are future beneficiaries; 2) the financial consequences are relatively small among borrowers. It is

[32] Note that future beneficiaries are equally likely to be skipping payments for any reason (see alternative delinquency definition #4 in Appendix Tables A3 and A4).
[33] According to this formula, households will receive 15 percent of benefit offsets if their monthly benefits exceed $882. Over 90 percent of the OASI beneficiaries in our sample report receiving more than $882 in monthly benefits.
[34] Calculations based on Federal Reserve Bank of New York (2022).

important to put these findings into context by combining them with the patterns of student loan holding presented earlier, given the higher share of borrowers in racial minority groups and the growing trend in student loan debt. A regression model of student loan delinquency on all beneficiaries, rather than the student loan borrower sample, informs on the magnitude of the potential threat delinquency poses to the retirement security of beneficiaries, accounting for demographic differences in student loan holding status. Results (in Table 7) show that Black households are 2.6 percentage points more likely to be delinquent on student loans, more than doubling the sample mean of 1.7 percent. Other correlates of delinquency are similar to those in the student debt holding model – young age, being married, college education, low income and wealth are associated with higher likelihoods of being delinquent in the full sample. Again, the results show rapid increases in observed delinquency over time, at a rate of 0.3 percent per year, indicating that more households may be at risk of benefit offsets in the future.

Impact of the Biden Debt Forgiveness Plan

Previous findings suggest that, without policy interventions, the risk of student loan delinquency and benefit offsets will be higher among future OASI beneficiaries. The next part of the analysis focuses on the impact of the Biden administration's direct debt relief on student loan holding, balances, and delinquency for this group of younger adults.

Table 8 presents student debt holding following the debt forgiveness, including the $10,000 overall relief and the additional $20,000 relief for Pell grant recipients, in comparison with our baseline results. The debt forgiveness completely eliminates student debt for more than 40 percent of borrowers among future beneficiaries, leading to declines in the proportion of borrowers in the sample. Both Black and Hispanic households experience a slightly larger percentage-point decrease in student debt holding than White borrowers. Table 9 also shows that Black and Hispanic borrowers benefit more from the debt relief plan by having higher amounts of debt forgiven.

The effect of the debt forgiveness plan on delinquency is also substantial. The delinquency rate decreases by 36 percent among all borrowers, with Hispanic borrowers experiencing an even higher 46-percent decrease (see Table 10). Black borrowers, again, see the largest percentage-point decrease in delinquency rates, but the percent change is similar to that experienced by White households.

It is worth noting that our estimates on the effect of the debt relief plan are downwardly biased. While our preliminary analysis finds little evidence of narrowing racial gaps in student debt delinquency, the true effects of the debt relief plan will likely be more positive. The takeaway is that even our conservative estimates show that Black and Hispanic borrowers have higher rates of complete debt forgiveness and greater amount of debt forgiven.

Conclusion

Only a small percentage of current OASI beneficiaries have student loan debt and an even smaller proportion is delinquent on student loans. However, student loan debt and delinquency are concentrated among economically disadvantaged groups – low-income and Black households are more likely to still hold student debt in old age and to struggle to make payments.

When evaluating the financial consequences, the analysis takes approaches that lean toward overestimation. Nevertheless, the estimated financial consequences – Social Security benefit offsets – are small in absolute terms, but with caveats. The amount lost is sufficient to pay off the national average credit card debt. While few households are projected to be pushed into poverty due to garnished benefits, a nontrivial share of student loan borrowers are already in poverty before benefit offsets are projected to be imposed, which will further undermine their retirement security.

Our regression analysis also shows a strong upward trends in all aspects of student debt – share holding debt, remaining balances, and delinquency over time. As today's workers continue to move into retirement, student debt and the associated toll on retirement security may become more common among OASI beneficiaries.

This escalating problem has spurred calls for reform of the student debt system, with the most recent reform plan just announced at the end of August 2022. This paper provides information on the risks that the current system imposes on current and future OASI beneficiaries and the racial gap in student loan debt and delinquency, which will help inform policy discussions about student loan programs and the tools available to target disadvantaged borrowers and help them avoid delinquency and default. The Biden administration student loan forgiveness plan is estimated to fully eliminate debt for more than 40 percent of student loan holders in our analysis. Our preliminary analysis suggests that Black and Hispanic borrowers will benefit more from the debt relief plan, receiving the highest amount of debt forgiveness and experiencing the largest drop in loan holding. Future research can shed light on how well the administration's reforms on the income-driven repayment plan target borrowers in racial minority groups and those in student loan delinquency and on the verge of default.

References

Amir, Elan, Jared Teslow, and Christopher Borders. 2022. "The MeasureOne Private Student Loan Report." San Francisco, CA: MeasureOne. Available at: https://fs.hubspotusercontent00.net/hubfs/6171800/assets/downloads/MeasureOne%20Private%20Student%20Loan%20Report%20Q3%202021%20FINAL%20VERSION.pdf

Bennett, Neil M., Michael D. King, and Mark A. Klee. 2022. "Proposed Debt Forgiveness Would Make Large Dent in Student Loan and Total Unsecured Debts." Washington, DC: U.S. Census Bureau.

Butrica, Barbara A. and Nadia S. Karamcheva. 2020. "Is Rising Household Debt Affecting Retirement Decisions?" Working Paper 13182. Bonn, Germany: IZA.

Cunningham, Alisa F. and Gregory S. Kienzl. 2011. "Delinquency: The Untold Story of Student Loan Borrowing." Blacksburg, VA: Virginia Polytechnic Institute and State University." Available at: https://vtechworks.lib.vt.edu/handle/10919/92663

Federal Reserve Bank of New York. 2022. "Quarterly Report on Household Debt and Credit, August 2022." New York, NY.

Freddie Mac. 2021. "30-Year Fixed Rate Mortgage Rates Since 1971." McLean, VA. Available at: http://www.freddiemac.com/pmms/pmms30.html

Goss, Jacob, Daniel Mangrum, and Joelle Scally. 2022. "Revisiting Federal Student Loan Forgiveness: An Update Based on the White House Plan." New York, NY: Federal Reserve Bank of New York.

Government Accountability Office. 2014. "Older Americans' Inability to Repay Student Loans May Affect Financial Security of a Small Percentage of Retirees." Washington, DC.

Government Accountability Office. 2016. "Improvements to Program Design Could Better Assist Older Student Loan Borrowers with Obtaining Permitted Relief." Washington, DC.

Haughwout, Andrew F., Donghoon Lee, Joelle Scally, and Wilbert van der Klaauw. 2019. "Just Released: Racial Disparities in Student Loan Outcomes." New York, NY: Federal Reserve Bank of New York.

Karamcheva, Nadia, Jeffrey Perry, and Constantine Yannelis. 2020. "Income-Driven Repayment Plans for Student Loans." Washington, DC: Congressional Budget Office.

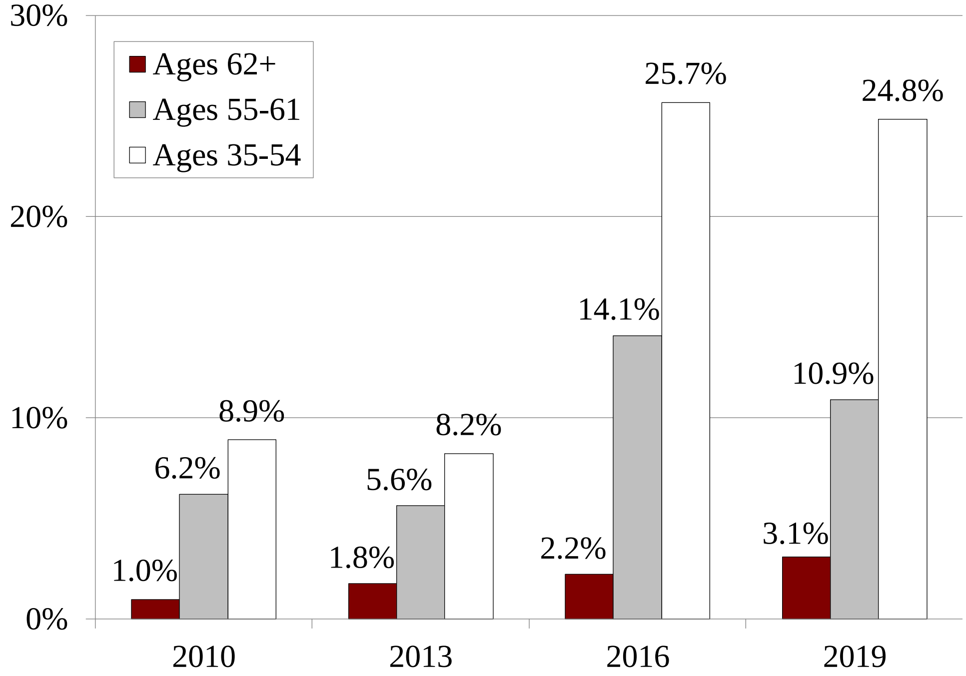
Looney, Adam and Vivien Lee. 2018. "Parents Are Borrowing More and More to Send Their Kids to College – and Many Are Struggling to Repay." Washington, DC: The Brookings Institution.

National Center for Education Statistics. 2019. “Trends in Pell Grant Receipt and the Characteristics of Pell Grant Recipients: Selected Years, 2003–04 to 2015–16.” NCES 2019-487. Washington, DC.

White House. 2022. “FACT SHEET: President Biden Announces Student Loan Relief for Borrowers Who Need It Most.” Washington, DC.

U.S. Board of Governors of the Federal Reserve System. *Survey of Consumer Finances*, 2019. Washington, DC.

Figure 1. *Trends in Student Debt Holding, by Age Group*



Source: Authors' calculations based on the U.S. Board of Governors of the Federal Reserve System, *Survey of Consumer Finances* (SCF) (2010-2019).

Table 1. *Student Loan Balances among Current and Future OASI Beneficiaries*

	Current beneficiaries (ages 62 or above)	Future beneficiaries (ages 35-61)
Sample size	5,395	13,111
Share of sample with student loans	1.9%	14.8%
Number of observations with student loans	87	1,616
Among student loan borrowers:		
Origination balance	$45,535	$47,883
Outstanding balance	$30,617	$35,256
Years holding student loan debt	9.0	7.7
Outstanding balance in quantiles:		
Bottom quantile	$2,261	$2,957
2nd quantile	6,968	9,223
3rd quantile	16,785	19,538
4th quantile	36,566	38,668
Top quantile	96,569	106,396

Source: Authors' calculations based on the 2010-2019 SCF.

Table 2. *Household Characteristics, by Student Debt Holding*

	Current beneficiaries (ages 62 or above)		Future beneficiaries (ages 35-61)	
	Student loan borrowers	No student loans	Student loan borrowers	No student loans
Demographic characteristics				
Age	70.0	74.1***	45.9	48.7***
Age Spouse	62.5	68.7***	42.9	45.8***
Married	70.0%	52.0%***	65.4%	61.4%***
Non-Hispanic white	63.1	81.6***	63.5	66.8***
Non-Hispanic Black	24.8	10.7***	23.7	14.5***
Hispanic	8.5	4.9	8.7	13.0***
Some college	24.8	22.5	32.2	24.9***
Has Bachelor's degree or above	42.1	30.8**	45.6	33.7***
Household financials				
Household income	$77,672	$76,809	$100,893	$122,059***
Homeowner	73.6%	82.4%*	64.1%	68.2%***
Household net assets	$429,487	$896,744***	$243,049	$717,006***
Number of student loan borrowers	87	5,308	1,616	11,495

Note: Stars indicate statistical significance of mean differences in characteristics by student debt holding status. *** p<0.01, ** p<0.05, * p<0.1.
Source: Authors' calculations based on the 2010-2019 SCF.

Table 3. *Regression of Student Debt Holding on Household Characteristics*

Household characteristics	Has any student loans
Age	-0.005***
	(2×10^{-4})
Income (in $100k)	-0.001**
	(4×10^{-4})
Single female	0.049***
	(0.007)
Married	0.053***
	(0.006)
Some college	0.056***
	(0.006)
College	0.070***
	(0.006)
Black	0.069***
	(0.009)
Hispanic	-0.025***
	(0.009)
Other race	-0.044***
	(0.012)
Net worth (in $1m)	-0.002***
	(3×10^{-4})
Survey year	0.012***
	(0.001)
Sample size	18,506
R-squared	0.091

Note: The sample pools all current and future beneficiaries in the 2010-2019 SCF. Linear time trend is included in the OLS regression. Robust standard errors in parentheses. *** p<0.01, ** p<0.05.
Source: Authors' calculations based on the 2010-2019 SCF.

Table 4. *Regression of Student Debt Balance on Household Characteristics*

Household characteristics	Log of student loan balance among borrowers
Age	-0.006
	(0.004)
Income (in $100k)	0.136***
	(0.041)
Single female	0.473***
	(0.138)
Married	0.520***
	(0.127)
Some college	0.198**
	(0.091)
College	0.716***
	(0.086)
Black	0.023
	(0.084)
Hispanic	0.186
	(0.121)
Other race	0.009
	(0.151)
Net worth (in $1m)	-0.108**
	(0.047)
Survey year	0.080***
	(0.011)
Number of student loan borrowers	1,703
R-squared	0.121

Note: The sample pools all current and future beneficiaries in the 2010-2019 SCF. Linear time trend is included in the OLS regression. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Source: Authors' calculations based on the 2010-2019 SCF.

Table 5. *Student Loan Delinquency and Benefit Offsets, by Race*

	All	Subgroups by race		
		White	Non-Hispanic Black	Hispanic
Panel A. Current beneficiaries				
Delinquent and facing benefit offsets	24.1%	22.3%	29.2%	32.9%
Among delinquent borrowers:				
Outstanding balance	$38,452	$43,208	$33,891	$26,377
Max. annual SS benefits at-risk	$2,299	$2,204	$2,372	$2,585
Percent of household income at-risk	6.1%	7.2%	5.2%	2.9%
Number of delinquent borrowers	19	12	5	2
Panel B. Future beneficiaries				
Delinquent and facing benefit offsets	15.4%	12.5%	24.4%	14.1%
Among delinquent borrowers:				
Outstanding balance	$46,661	$42,502	$48,836	$38,516
Max. annual SS benefits at-risk	$2,594	$2,484	$2,991	$2,170
Percent of household income at-risk	4.4%	4.1%	4.9%	3.8%
Number of delinquent borrowers	240	126	90	17

Source: Authors' calculations based on the 2010-2019 SCF.

Table 6. *Financial Consequences of Benefit Offsets, by Race*

	All	Subgroups by race		
		White	Non-Hispanic Black	Hispanic
Panel A. Current beneficiaries				
Delinquent and facing benefit offsets	24.1%	22.3%	29.2%	32.9%
Pushed into poverty by benefit offsets	1.2	1.9	0.0	0.0
Already in poverty before benefit offsets	2.1	1.8	3.7	0.0
Number of student loan borrowers	87	58	19	6
Panel B. Future beneficiaries				
Delinquent and facing benefit offsets	15.4%	12.5%	24.4%	14.1%
Pushed into poverty by benefit offsets	0.3	0.5	0.2	0.0
Already in poverty before benefit offsets	1.9	1.7	3.1	0.0
Number of student loan borrowers	1,616	1,048	364	137

Source: Authors' calculations based on the 2010-2019 SCF.

Table 7. *Regression of Student Loan Delinquency on Household Characteristics*

Household characteristics	Delinquent on student loans
Age	-0.001***
	(8×10^{-5})
Income (in $100k)	-0.001***
	(1×10^{-4})
Single female	0.012***
	(0.004)
Married	0.004
	(0.003)
Some college	0.014***
	(0.003)
College	0.009***
	(0.003)
Black	0.026***
	(0.005)
Hispanic	-0.002
	(0.004)
Other race	-0.008*
	(0.004)
Net worth (in $1m)	-0.000***
	(5×10^{-5})
Survey year	0.003***
	(3×10^{-4})
Sample size	18,506
R-squared	0.022

Note: The sample pools all current and future beneficiaries in the 2010-2019 SCF. Linear time trend is included in the OLS regression. Robust standard errors in parentheses. *** p<0.01, * p<0.1.
Source: Authors' calculations based on the 2010-2019 SCF.

Table 8. *Student Loan Holding among Future OASI Beneficiaries Following Debt Forgiveness*

	Future beneficiaries (ages 35-61)		
	Baseline result	Following debt forgiveness	Percent change
Sample size	13,111	13,111	
Proportion of student loan borrowers	14.8%	8.5%	-43%
Proportion of student loan borrowers among households by race:			
White	14.1%	8.2%	-42%
Black	22.0%	12.3%	-44%
Hispanic	10.4%	5.6%	-46%

Source: Authors' calculations based on the 2010-2019 SCF.

Table 9. *Forgiven Student Loan Balance among Future Beneficiaries Following Debt Forgiveness*

	Future beneficiaries (ages 35-61)
Number of student loan borrowers	1,616
Proportion of borrowers with debt completely forgiven	42.5%
Amount forgiven	$12,298
Amount forgiven among borrowers by race:	
White	$11,359
Black	$14,077
Hispanic	$13,857

Source: Authors' calculations based on the 2010-2019 SCF.

Table 10. *Student Loan Delinquency of Borrowers among Future OASI Beneficiaries Following Debt Forgiveness*

	Future beneficiaries (ages 35-61)		
	Baseline result	Following debt forgiveness	Percent change
Delinquency rate among borrowers	15.4%	9.9%	-35.8%
Delinquency rate among student loan borrowers by race:			
White	12.5%	8.0%	-36.4%
Black	24.4%	16.2%	-33.5%
Hispanic	14.1%	7.6%	-46.4%

Source: Authors' calculations based on the 2010-2019 SCF.

Appendix

Table A1. *Sample Restrictions*

Beginning sample	24,498
Household heads aged 62 or above	7,445
Receiving any SS Payments	5,784
OASI beneficiaries only	5,395
Household heads aged 35+	13,111
Future OASI beneficiaries' sample	13,111

Note: The current beneficiary sample includes OASI beneficiaries in single households and married households with any OASI beneficiary above age 62 in the 2010-2019 SCF. The future beneficiary sample has no restrictions other than age.

Table A2. *Student Loan Balance, by Type of Student*

	Current OASI beneficiaries (ages 62 or above)		Future beneficiaries (ages 35-61)	
	For self and/or spouse/ partner	For others (children, grandchildren, etc.)	For self and/or spouse/ partner	For others (children, grandchildren, etc.)
Share of sample with debt	1.0%	1.5%	16.7%	5.1%
Among student loan borrowers:				
Median number of student loans	1	1	1	1
Mean origination balance	$68,598	$48,558	$55,597	48,279
Mean outstanding balance	45,708	32,365	39,351	40,506
Mean outstanding balance in quantiles:				
Bottom quantile	3,368	3,290	3,433	4,967
2nd quantile	14,919	8,633	11,360	13,417
3rd quantile	33,624	18,810	23,490	24,212
4th quantile	67,957	37,264	44,080	47,903
Top quantile	126,918	100,384	116,050	113,001
Number of student loan borrowers	20	39	883	275

Source: Authors' calculations based on the 2016-2019 SCF.

Table A3. *Alternative Definitions of Student Loan Delinquency, Current Beneficiaries*

Delinquency indicators	Federal student loan borrowers by race			
	All	White	Non-Hispanic Black	Hispanic
N	87	58	19	6
Preferred definition: Not making payments and payment not deferred				
Proportion among borrowers	24.1%	22.3%	29.2%	32.9%
Average outstanding balance	$38,452	$43,208	$33,891	$26,377
Number of delinquent borrowers	19	12	5	2
Alternative definition #1: Unable to afford payments and haven't made payments since last calendar year				
Proportion among borrowers	6.4%	2.3%	17.1%	0.0%
Average outstanding balance	$11,660	$31,956	$6,661	
Number of delinquent borrowers	3	1	2	0
Alternative definition #2: Unable to afford payments				
Proportion among borrowers	12.5%	10.2%	23.4%	0.0%
Average outstanding balance	$28,007	$21,175	$33,375	
Number of delinquent borrowers	7	4	3	0
Alternative definition #3: Not making payments and; no plans to make payments in next calendar year				
Proportion among borrowers	14.8%	13.7%	20.6%	0.0%
Average outstanding balance	$30,710	$30,441	$35,065	
Number of delinquent borrowers	13	9	3	0
Alternative definition #4: Not making payments				
Proportion among borrowers	29.2%	32.4%	31.1%	0.0%
Average outstanding balance	$37,506	$34,108	$49,954	
Number of delinquent borrowers	25	18	6	0

Source: Authors' calculations based on the 2016-2019 SCF.

Table A4. *Alternative Definitions of Student Loan Delinquency, Future Beneficiaries*

Delinquency indicators	Federal student loan borrowers by race			
	All	White	Non-Hispanic Black	Hispanic
N	1,616	1,048	364	137
Preferred definition: Not making payments and payment not deferred				
Proportion among borrowers	15.4%	12.5%	24.4%	14.1%
Average outstanding balance	$46,661	$43,671	$51,355	445,031
Number of delinquent borrowers	240	126	90	17
Alternative definition #1: Unable to afford payments and; haven't made payments since last calendar year				
Proportion among borrowers	8.6%	8.0%	11.2%	7.1%
Average outstanding balance	$29,299	$32,321	$27,875	$16,708
Number of delinquent borrowers	95	*57*	30	6
Alternative definition #2: Unable to afford payments				
Proportion among borrowers	11.6%	10.5%	15.2%	12.8%
Average outstanding balance	$36,367	$42,119	$29,263	$30,707
Number of delinquent borrowers	131	76	42	11
Alternative definition #3: Not making payments and; no plans to make payments in next calendar year				
Proportion among borrowers	14.9%	13.0%	19.3%	17.9%
Average outstanding balance	$38,824	$38,196	$36,699	$48,064
Number of delinquent borrowers	236	138	68	24
Alternative definition #4: Not making payments				
Proportion among borrowers	30.1%	26.6%	38.2%	36.3%
Average outstanding balance	$40,694	$38,264	$45,343	$42,426
Number of delinquent borrowers	486	288	138	47

Source: Authors' calculations based on the 2016-2019 SCF.

Table A5. *Regression of Student Loan Delinquency on Household Characteristics among Borrowers*

Household characteristics	Delinquent on student loans among borrowers
Age	0.002
	(0.001)
Income (in $100k)	-0.034***
	(0.009)
Single female	0.025
	(0.041)
Married	-0.043
	(0.037)
Some college	0.020
	(0.028)
College	-0.030
	(0.025)
Black	0.081***
	(0.026)
Hispanic	0.002
	(0.036)
Other race	-0.041
	(0.040)
Net worth (in $1m)	-0.005
	(0.006)
Survey year	0.013***
	(0.003)
Number of student loan borrowers	1,703
R-squared	0.059

Note: The sample pools all current and future beneficiaries who are student loan borrowers in the 2010-2019 SCF. Linear time trend is included in the OLS regression. Robust standard errors in parentheses. *** p<0.01.
Source: Authors' calculations based on the 2010-2019 SCF.

Table A6. *Imputed Pell Grant status of Student Loan Borrowers among Future Beneficiaries*

	Student loan borrowers	Benchmarks	Source of benchmarks
Number of observations	275		
Proportion receiving Pell Grants	55.9%	60%	White House (2022)
Race composition of Pell Grant recipients among borrowers:			
White	52.7%	44.5%	Calculations based on NCES (2019)
Black	27.7%	26.8%	
Hispanic	14.6%	19.1%	

Source: Authors' calculations based on the 2010-2019 SCF.

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