Forum

# THE DISTRIBUTIONAL EFFECTS OF STUDENT LOAN FORGIVENESS: AN UPDATE ON SAVE AND THE COVID-19 MORATORIUM

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*Student loan forgiveness policies in the United States have undergone significant evolution and debate since 2020, with varying degrees of targeting and regressive implications. This paper offers an update on student loan forgiveness developments since 2020, evaluating recent proposals through the framework Catherine and Yannelis present in their work on the distributional effects of student loan forgiveness. We study the economic dynamics of student loan forgiveness in 2024, tracking proposed and implemented forgiveness measures and their distributional impacts. We find that new proposals expanding income-driven repayment are more progressive than a universal loan forgiveness plan, but we caution against the potential for increased moral hazard at the school level.*

*Keywords: student debt, inequality*

*JEL Codes: D14, D31, H52, H81, I24*

## I. INTRODUCTION

Since 2020, student loan forgiveness has gone through a tumultuous policy debate, with several iterations of loan forgiveness being proposed, implemented, and blocked by courts. Following the Supreme Court blocking loan forgiveness through executive action in 2022, the Biden administration has moved toward more targeting loan forgiveness programs and expanding Income-Driven Repayment (IDR) plans. Since these momentous changes in the student loan market, multiple policies have continued to shape the potential distributional effect of student loan forgiveness. Beginning

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with the pandemic and the moratorium, many borrowers paused their payments for close to four years and saw the number of payments due through their IDR plan decrease by 42 months (i.e., the number of months between March 2020 and October 2023). During this time, the Biden administration introduced the Saving on a Valuable Education (SAVE) plan, the most generous IDR plan to date. Last but not least, in August 2022, the Biden administration attempted to implement a $10,000 targeted balance forgiveness plan, which was eventually struck down by the Supreme Court.[1]

This paper provides an update on student loan forgiveness in the United States since 2020 and evaluates new forgiveness proposals through the framework of Catherine and Yannelis (2023). Catherine and Yannelis (2023) show that universal loan forgiveness plans are regressive, while IDR plans provide more benefits for lower- and middle-income borrowers. We provide an overview of the economics of student loan forgiveness, along with an update on proposed and implemented loan forgiveness policies since 2020. Forgiving student loans in an untargeted manner is inherently regressive. This is the case for two reasons. First, both on the intensive and the extensive margins, student loan borrowers earn more than those who do not borrow. This is because people who go to college earn more than those who do not go to college, and people who spend more years in college (and often complete or go to graduate school) typically earn more than those who spend fewer years in college (who often do not attend or complete). The second reason why student loan forgiveness is regressive is that the current system has substantial forgiveness built-in for low-income borrowers. This forgiveness comes through several channels, but the largest of these is IDR plans.

In this paper, we estimate borrowers' present value of payments to compare with their current balances and the present value across different repayment regimes. To do so, we simulate borrowers' income and repayment trajectories based on reported values in the Survey of Consumer Finances (SCF). We begin by exploring the reduction in the present value of expected payments caused by the moratorium. We continue by studying the potential distributional effects of policies proposed or implemented by the Biden administration. This includes both the proposed $10,000 forgiveness and the implemented SAVE plan. Consistent with Catherine and Yannelis (2023), we find the former to be less progressive than the latter.

We conclude with an analysis of the new IDR rules under the SAVE plan, primarily focusing on the existing stock of student debt and its potential growth due to the significantly more lenient repayment terms of new regulations. These changes are

[1] Since 2020, there have been several loan forgiveness proposals, beginning with the 2020 US Presidential Election. The most well-known proposal was the August 2022 student loan forgiveness announcement, which was struck down by the US Supreme Court in June 2023. This proposal would have forgiven $10,000 for all borrowers whose earnings were less than $125,000 and $20,000 for borrowers who had received a Pell Grant. In tandem, the Biden administration began forgiving loans under administrative discharge and other existing programs. By early 2024, this led to $130 billion in loan forgiveness. These events, plus the potential for further policy commentary throughout the incoming 2024 presidential election, motivate the need to update Catherine and Yannelis (2023).

expected to not only encourage more students to borrow but also result in each borrower accumulating larger debt balances during their academic pursuits. Further examination of the policy change reveals potential consequences and concerns, such as increased adverse selection and moral hazard within the student debt program. While students from disciplines such as engineering or economics may not see significant changes in their debt costs, those in majors with lower earning potential, such as sociology, stand to benefit substantially under the new rules. However, the overall impact of these fiscal transfers on college students remains uncertain, as the incidence of the subsidy could be divided between borrowers and universities. There remain significant concerns that universities might exploit increased demand for higher education by raising tuition, exacerbating the long-term trend of rising educational costs in the United States.

This paper is most closely related to Catherine and Yannelis (2023), who study the distributive implications of student loan forgiveness. Catherine and Yannelis (2023) show that universal and capped student loan forgiveness programs are highly regressive, while IDR plans offer a relatively more progressive alternative. This paper extends the framework of Catherine and Yannelis (2023) to model more recently proposed or implemented forgiveness and IDR plans and discusses potential concerns with IDR plans arising from moral hazard at the school level.

More broadly, this paper also joins a burgeoning literature on student loans, most closely relating to papers studying student loan forgiveness and IDR. Yannelis and Tracey (2022) and Looney and Yannelis (2024) provide recent reviews. Most closely related are Catherine and Yannelis (2023), Boutros, Clara, and Gomes (2024), and Maggio, Kalda, and Yao (2020), who study loan forgiveness directly, Briones, Powell, and Turner (2023), who study the distributional effects of the payment pause, as well as de Silva (2024), Herbst (2023), and Mueller and Yannelis (2019, 2022), who study IDR. Finally, this paper joins a limited number of papers, including Barahona et al. (2023), Looney and Yannelis (2015, 2022), Kargar and Mann (2023), Cornaggia and Xia (2024), Lucca, Nadauld, and Shen (2019), Black, Turner, and Denning (2023), and Eaton, Howell, and Yannelis (2020), which study student lending and school incentives.

## II. INSTITUTIONAL BACKGROUND

### A. Student Loan Forgiveness

Beginning in the early 2010s, there were significant calls for student loan forgiveness. While many of these calls come from self-described progressives, Catherine and Yannelis (2023) demonstrate that universal student loan forgiveness is a regressive policy. Their estimates indicate that the top quintile of the income distribution would gain six times as much forgiveness as the bottom quintile.

A key point that is often missed by many commentators is that existing law already has significant loan forgiveness built-in for many lower-income borrowers.

The largest projected source of forgiveness for persistently low-income borrowers is through IDR plans. By default, borrowers are enrolled in the Standard Plan, which is a 10-year fixed repayment plan with a fixed or variable rate depending on the year of origination. In 1994, the Income-Contingent Repayment (ICR) plan was introduced, and, in the last 15 years, numerous new IDR plans were put in place. Fundamentally, all these plans allow borrowers to pay a specific percentage of their income above a poverty line threshold, and after a set number of payments, they receive forgiveness on their outstanding balances.

Table 1 compares currently available[2] IDR plans for borrowers and shows why SAVE is the most generous plan to date. Benefits from the SAVE plan went into effect in July 2023, February 2024, and July 2024. The SAVE plan increased generosity along four main dimensions. First, the income exemption, under which borrowers make no payments, was increased from 150 to 225 percent of the poverty line. Thus, an individual making less than $33,885 and a family of four making less than $70,200 would pay nothing in 2024. Second, undergraduate borrowers under the SAVE plan pay 5 percent of their income above the threshold, while graduate borrowers pay 10 percent. Borrowers with both types of loans pay a weighted average of the two rates. For example, a borrower who used half of the total amount they borrowed for undergraduate studies and half for graduate school would have a rate of 7.5 percent. Third, forgiveness on outstanding balances occurs after 10 years, rather than 20 years, for loan balances below $12,000. For every $1 over $1,000 increments above $11,000, the plan requires the borrower to pay for an extra year. For example, a borrower with $12,001 in initial balances would pay for 11 years. For borrowers with no graduate debt, the repayment period is limited to 20 years. For those with any amount of graduate debt, the limit is set at 25 years. Fourth, in contrast with other plans, balances grow according to borrowers' payments and not necessarily the interest rate on the loan. With interest subsidization, only borrowers whose payment surpasses the interest on the loan see their balance increase according to the rate on the loan.

In addition, the SAVE plan included a number of technical details benefiting borrowers. An important one is that, prior to 2020, student loan forgiveness was treated as taxable income. The Coronavirus Aid, Relief, and Economic Security (CARES) Act in 2020 made student loan forgiveness tax-free through 2025, and Congress has the ability to extend this provision. Furthermore, legislation has made it simpler for borrowers to re-enroll in IDR with automatic and auto-filling forms. Mueller and Yannelis (2022) show that these simplifications can drastically increase uptake in IDR and benefit borrowers.

In terms of legislation concerning direct student loan balance forgiveness, the Supreme Court annulled the Biden administration's loan forgiveness proposal in June 2023. This indicates that, in the absence of new legislation or litigation, future

[2] SAVE replaced the preexisting REPAYE plan, which is the most similar plan. However, SAVE is more generous on all fronts. Further details can be found at https://studentaid.gov/announcements-events/save-plan.

**Table 1**
Currently Available IDR Plans

| Plan | Repayment Period | Poverty Line Threshold (%) | Discretionary Income (%) | Interest Subsidization | Capped Payment | Year Introduced |
|---|---|---|---|---|---|---|
| SAVE | 10–25 | 225 | 5–10 | Yes | No | 2023 |
| PAYE | 20 | 150 | 10 | No | Yes | 2012 |
| IBR | 20 or 25 | 150 | 10 or 15 | No | Yes | 2009 |
| ICR | 25 | 100 | 20 | No | No | 1994 |

Note: Table 1 presents the general terms of all currently available IDR plans to borrowers in 2024.

forgiveness will still solely rely on the generosity of IDR plans. Yet, there are also other ways that many borrowers can receive loan forgiveness. For example, under Public Service Loan Forgiveness (PSLF), borrowers who work for the public sector or in nonprofit public service can see their loans discharged after 10 years of repayment. Loans can also be discharged under borrower defense if schools engage in fraudulent or deceitful practices or if they close. In very rare cases, student loans can also be discharged in bankruptcy, but borrowers have to prove a legal standard called "undue hardship." Very few are able to do so each year, typically fewer than one hundred (Yannelis, 2020).

Abstracting from policies that already target low-income borrowers, the main reason universal student loan forgiveness is regressive is that, both on extensive and intensive margins, student loan borrowers earn more. Indeed, numerous data sources show a near-monotonic positive relationship between average borrowing and earnings. This can be easily understood by looking at the academic and professional trajectories of lawyers and doctors. However, a simple correlation between earnings and borrowing understates the degree of regressivity of blanket student loan forgiveness. The reason is that, through existing policies, many lower-income borrowers will never fully repay their loans and will eventually receive forgiveness anyway. As such, many forgiveness proposals have little impact on lower-income borrowers and thus mainly provide benefits to upper-income borrowers. As Catherine and Yannelis (2023) show, properly accounting for the present value of existing forgiveness makes blanket forgiveness programs even more regressive.

Capping student loan forgiveness at specific amounts does not solve the issue of regressivity or may even exacerbate the problem. Because many borrowers in IDR are paying a portion of their income, they are not paying down their loans or even negative amortizing. For lower-income borrowers in IDR, debt forgiveness may just go toward balances that will never be paid anyway. As a result, these low-income borrowers will just end up paying the same portion of their lifetime income. Consider the case of a single mother living with two children who earns $50,000. Under IDR rules in 2020, she would pay less than $1,742 each year. If we assume a

4 percent discount rate and that the woman is 15 years away from forgiveness, she will repay $19,400, and the remaining balances will be forgiven. To this single mother earning less than the median family income, it makes no difference whether she owed $50,000 or $100,000. She would not benefit from $10,000 in forgiveness, as she would still end up paying $19,400 in total. In contrast, if we compare this single mother to a mother who owes $50,000 and earns $100,000, each dollar forgiven would benefit the higher-earning mother as the present value of her expected payments is much closer to her outstanding balance.

When considering loan forgiveness policies, it is important to consider the trajectory of earnings throughout the progression of the life cycle. Many lucrative careers, such as those of doctors or lawyers, face periods of low earnings early in life through programs such as residencies or clerkships, before very rapid salary growth culminating in high earnings. These dynamics necessitate considering loan forgiveness over the life cycle. Static policies, such as one-time forgiveness, can make substantial transfers to individuals who have high lifetime incomes. One advantage of IDR plans is that forgiveness accumulates over many years, and these plans avoid substantial forgiveness for individuals who have transitory low earnings, but higher incomes later in life.

## B. Update on Forgiveness from 2020 to 2024

The Biden campaign promised significant student loan forgiveness during the 2020 election campaign, although many details were left open. Beginning in 2021 the Department of Education (DOE) began rolling out substantial debt relief programs which have resulted in more than $130 billion in student loan forgiveness. These programs were separate from the plan the Biden administration announced in August 2022. The initial plan promised $10,000 in forgiveness for all borrowers earning less than $125,000 and up to $20,000 for borrowers who came from low-income families and had received a Pell Grant. The US Supreme Court struck down the plan in June 2023.[3] Following the Supreme Court ruling, the Biden administration shifted toward smaller piecemeal orders, exploiting legal authority under fraudulent actions by schools, and through administrative discharge programs, such as PSLF and IDR. These smaller programs fell broadly into one of three categories: borrower defense, disability forgiveness, and payment count adjustments.

[3] The legal authority for the forgiveness executive order was the 9/11 Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act, which allowed the government to "waive or modify any statutory or regulatory provision applicable to the student financial assistance programs under title IV of the [Education Act] as the Secretary deems necessary in connection with a war or other military operation or national emergency". Historically the Act was used to cancel federal loans for fallen military service members during conflicts in Afghanistan and Iraq. The administration argued that COVID-19 was a national emergency and that the Act allowed loan cancellation. The Supreme Court ruled 6-3 that the law did not give the administration this authority, and the action was essentially an action to "rewrite that statute from the ground up" which would require legislation through Congress.

The largest amount of loan forgiveness came from tweaking administrative discharge programs through payment count adjustments. These adjustments centered on loosening the requirements for what payments could count toward PSLF and IDR forgiveness. Under the Trump administration, it was extremely difficult for borrowers to obtain documentation of payment counts for forgiveness under PSLF and IDR. The effective presumption was that most payments did not qualify, and borrowers had to provide proof of payments — sometimes from former loan servicers, some of which exited from federal loan servicing.

The payment count adjustments were applied retroactively, meaning that past payments that previously did not count toward forgiveness would now qualify. PSLF borrowers, who were eligible for forgiveness after 10 years of qualifying repayments, were required to submit an application to benefit from these adjustments. However, any borrower with a loan held by the DOE whose payment history qualified for IDR forgiveness under the new payment count adjustments automatically received forgiveness, even if they were not enrolled in IDR. As of 2023, PSLF borrowers have received more than $53.5 billion of student loan forgiveness, and another $44 billion has been forgiven through IDR payment count adjustments.

Much of the forgiveness beginning in 2021 was under borrower defense programs. Borrower defense forgiveness has had legal precedent in the United States since 1995 under DOE regulations, but was rarely used until June 2021, when the DOE announced approval of new borrower defense categories which initially resulted in $500 million in loan relief. These new categories awarded forgiveness to borrowers who attended schools that misrepresented postgraduation employment prospects or were unable to transfer credits due to school closure. Between 2021 and 2023, the DOE announced more than $22 billion of borrower defense forgiveness for approximately 1.3 million borrowers. High-profile cases include those who attended Westwood College ($1.5 billion), ITT Technical Institute ($3.9 billion), Ashford University ($72 million), and the University of Phoenix ($37 million).

Additional loan forgiveness occurred under the total and permanent disability (TPD) program. The TPD debt discharge program was designed to relieve debts for individuals with permanent disabilities that prevented them from being able to pay off their loans. In March 2021, the DOE announced significant changes to the TPD program, which included removing an income moderating period that commonly prevented applicants from receiving relief. This action resulted in an immediate $1.3 billion of forgiveness for 41,000 individuals and has grown to $11.7 billion of forgiveness across more than 500,000 individuals as of December 2023.

Figure 1 shows loan forgiveness to date. The figure plots the cumulative amount of student loan debt forgiven in Panel A, and in Panel B the number of borrowers who received loan forgiveness as reported by the DOE. Debt amounts are reported in billions, and the number of borrowers is reported in millions. There has been a steady rise in loan forgiveness throughout the Biden administration, with a sharp rise following the Supreme Court decision in 2023. By early 2024, approximately 3.5 million borrowers had received $130 billion in student loan forgiveness. While this is

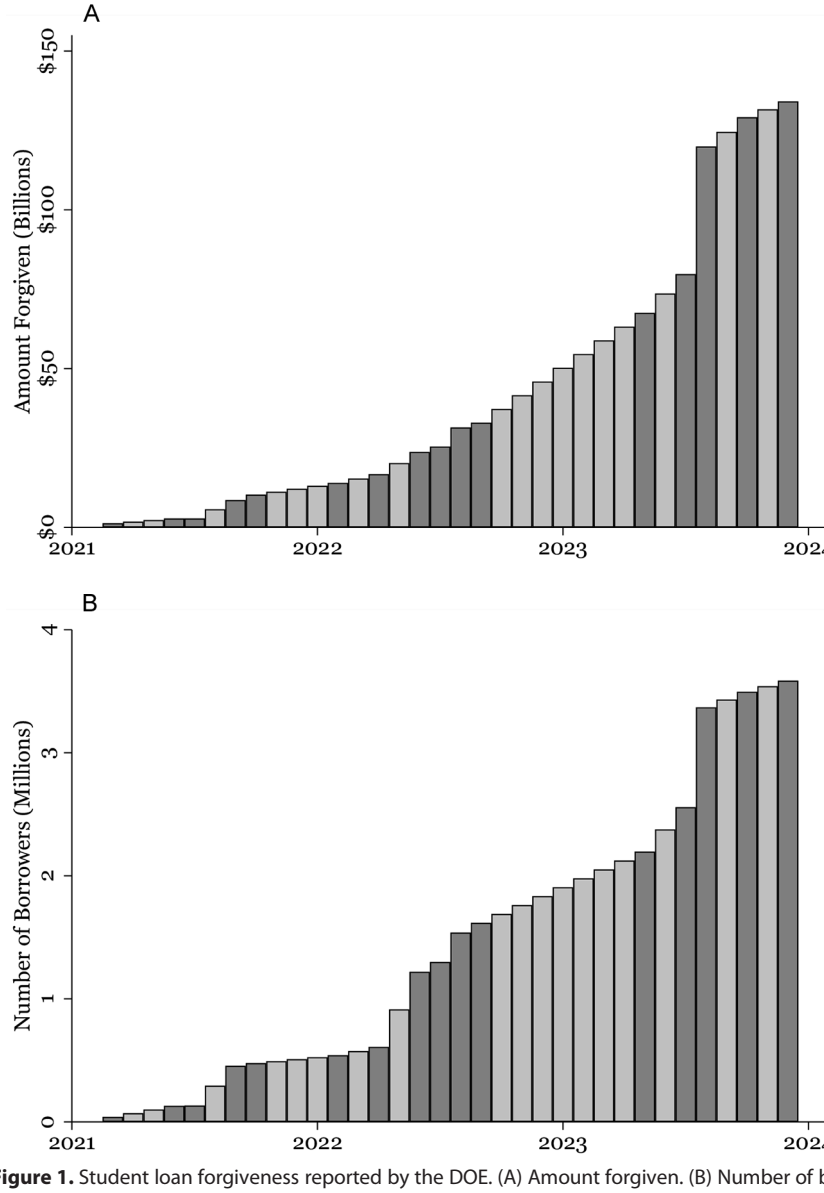


**Figure 1.** Student loan forgiveness reported by the DOE. (A) Amount forgiven. (B) Number of borrowers. This figure plots the cumulative amount of student loan debt forgiven and the number of borrowers who received loan forgiveness as reported by the DOE. Debt amounts are reported in billions and the number of borrowers is reported in millions. Dark bars mark months for which the DOE report forgiveness statistics and light bars mark where values have been linearly interpolated. The sources of the data are DOE press releases.

a substantial amount, it is only approximately 7.5 percent of the aggregate outstanding student debt stock and is similar to typical annual disbursement amounts.

## III. DATA

### A. SCF

The SCF is a triennial survey conducted by the Federal Reserve that collects detailed data on the assets, liabilities, income, and demographic characteristics of US households. Essential to our study, it also contains information on up to six student loans per household, including balances, interest rates, last year's payment, and IDR enrollment. Our sample includes all households led by individuals aged 22–60, further excluding any borrowers in school or in the grace period.

To extend and update the analysis of Catherine and Yannelis (2023), we would ideally rely on the 2022 SCF, as it is closest to 2024. However, the methodology of Catherine and Yannelis (2023) infers present values from observed payment patterns. Because of the moratorium, most borrowers made no payments in 2022. Figure 2 shows the share of loans in the 2019 and 2022 SCFs in active repayment by household per capita income decile. Indeed, while 82 percent of borrowers made payments in the 2019 SCF, only 43 percent did so in the 2022 survey. Therefore, because 2022 payments cannot be representative of future cash flows, we limit our study to the 2019 SCF. We apply SCF survey weights to obtain nationally representative estimates.

### B. Variable Construction

*Evolution of balances between 2019 and 2024*. To use 2019 data to study forgiveness in 2024, we need to predict the evolution of balances between 2019 and 2024. To do so, we assume that during the first year, borrowers made the payment predicted by the methodology of Catherine and Yannelis (2023) and described in Section IV. Afterward, we assume that during the moratorium borrowers made no payment and interest did not accrue. In short, our analysis relies on the same sample as Catherine and Yannelis (2023) but from 2024 onward, assuming that balances were reduced by one year of payment and that earnings evolved for five years following the process described in Subsection IV.C. Importantly, despite the lack of payments, the years during the moratorium counted toward forgiveness.

*Income deciles*. Our analysis sorts all households in our sample, borrowers and nonborrowers, into income deciles. To do so, we first normalize the household wage and salary income by the number of adults (single or couple).[4] Then, we use household

[4] Throughout the text, all per-capita measures only take into consideration the head of household and their partner.

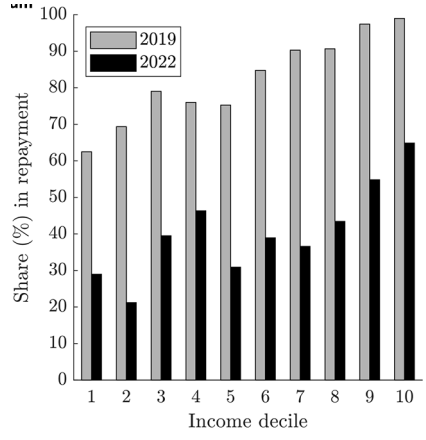


**Figure 2.** Share of loans in repayment. This figure displays the share of loans in repayment in the SCF by survey year. Loans are allocated to the per capita household income decile of their borrower.

survey weights to create within-cohort income deciles, where the cohort is defined by the age of the household's head.

## IV. METHODOLOGY

We estimate the present value of student loans using the methodology of Catherine and Yannelis (2023). In this section, we summarize this methodology, largely reproducing our previous work and updating it to take into account SAVE and the COVID-19 moratorium. We refer readers to our previous study for more details. We also formally review repayment rules before and after the introduction of the SAVE program, explaining how changes in repayment formulas are reflected in our projections.

### A. Present Values without SAVE

The present value $PV_{ilt}$ of loan $l$ in household $i$ in year $t$ is defined as the sum of discounted expected future payments $\mathbb{E}[P_{ilk}]$ using nominal discount rate $r_d$:

$$PV_{ilt} = \sum_{k=t} \frac{\mathbb{E}[P_{ilk}]}{(1 + r_d)^{k-t}}. \quad (1)$$

#### *1. Standard Plan and IDR Rules*

Payments continue until the loan is forgiven or fully paid off with balances evolving in the following way:

$$B_{ilt+1} = B_{ilt}(1 + r_{il}) - P_{ilt}, \tag{2}$$

where $r_{il}$ is the loan interest rate.

Borrowers reimburse their loans in one of two ways. The default is the 10-year fixed-payment schedule. Under this Standard Plan, the yearly fixed payment is as follows:

$$P_{il}^{\text{Fixed}} = \frac{B_{il}^{0} \times r_{il}}{1 - (1 + r_{il})^{-10}}, \tag{3}$$

where $B_{il}^{0}$ is the loan's initial balance.

Alternatively, borrowers can enroll in IDR, where they pay fraction $\theta_{il}$ of their income $Y_{it}$ above 1.5 times the federal poverty line (i.e., their discretionary income). However, payments are capped at the amount of the Standard Plan. If the household has more than one loan, the lump sum IDR payment is divided proportionally across loans based on the outstanding balances at each point in time. Payments under IDR are defined as follows:

$$P_{ilt}^{\text{IDR}} = \min\left[\theta_{il}^{\text{IDR}} \times \max(Y_{it} - 1.5 \times \text{FPL}_{it}, 0), P_{il}^{\text{Fixed}}\right], \tag{4}$$

where $\text{FPL}_{it}$ is the federal poverty line. We allow for outstanding balances to be forgiven after a number of years in repayment, as specified by IDR rules. The SCF indicates whether each loan is being repaid through IDR, but not the specific plan. To determine a timeline for forgiveness and the percentage of discretionary income $\theta_{il}$ to be paid, we make assumptions consistent with each cohort's available IDR plans. For loans associated with educational programs from which the borrower exited before 2014, outstanding balances are forgiven after 25 years. For loans after 2014, it is 20. For $\theta^{\text{IDR}}$, if a borrower left school before 2009, it is $\theta^{\text{IDR}} = 0.15$; otherwise, $\theta^{\text{IDR}} = 0.1$.

### *2. Forecasting Payments in the Data*

Because of IDR rules, the present value of loans can be substantially lower than their balance. To estimate present values, we forecast future yearly payments for each loan based on observed values in the SCF. It is generally assumed that households will continue to apportion the same income share to loan payments across time. We limit payment amounts of all borrowers to each period's outstanding balances plus interest. We forecast payments differently according to each loan, as explained below.

*Loans in IDR*. For borrowers who report being enrolled in IDR, we compute present values by forecasting future IDR payments in each period s as follows:

$$P_{ils} = \min(P_{ils}^{\text{IDR}}, B_{ils} \times (1 + r_{il})). \tag{5}$$

*Loans not in IDR*. For borrowers who do not report being in IDR, we distinguish between two cases:

- For a borrower who paid more than the standard 10-year plan ($P_{il}^{\text{Fixed}} < P_{ilt}$), their expected future payment is as follows:

$$P_{ils} = \min\left(P_{ilt} \times \frac{Y_{is}}{Y_{it}}, B_{ils} \times (1 + r_{il})\right). \tag{6}$$

- For a borrower who paid less than the standard 10-year plan ($P_{il}^{\text{Fixed}} > P_{ilt}$),

$$P_{ils} = \min\left(P_{ilt} \times \frac{Y_{is}}{Y_{it}}, P_{il}^{\text{Fixed}}, B_{ils} \times (1 + r_{il})\right), \tag{7}$$

where this second type of borrower could be paying less than scheduled for a variety of reasons. To be conservative, we essentially treat such a borrower as a special type of IDR enrollee who was misrecorded in the SCF. However, we let their payment differ from both the standard 10-year and IDR payments, allowing them to pay at their own pace. Yet, similar to regular IDR borrowers, they also qualify for forgiveness after a certain number of years in repayment, according to the year they left school.

*Loans in deferment or forbearance*. For borrowers who report missing payments due to forbearance or deferment, we assume they will enroll in IDR five years after leaving school and make payments accordingly. During this period, interest accrues at the loans' rate. Payments evolve as follows:

- if $s < \text{Graduation Year}_l + 5$:

$$P_{ils} = 0, \tag{8}$$

- if $s \geq \text{Graduation Year}_l + 5$:

$$P_{ils} = \min(P_{ils}^{\text{IDR}}, B_{ils} \times (1 + r_{il})). \tag{9}$$

## B. SAVE

We compute present values under SAVE using the same methodology but taking into account changes in rules. First, borrowers enrolled in SAVE benefit from interest rate subsidization.[5] Therefore, their balances evolve as follows:

[5] Borrowers who were previously enrolled in REPAYE were automatically enrolled in SAVE. REPAYE was a plan that also included interest subsidization but only at 50%. Because we cannot observe the borrowers' specific IDR plan in the SCF, we abstract from including any kind of interest subsidization in our baseline result.

$$B_{ilt+1} = B_{ilt} + \min\left(B_{ilt} \times r_{il}, P_{ilt}^{SAVE}\right) - P_{ilt}^{SAVE}. \quad (10)$$

Equation (10) is the counterpart of equation (2) before the reform.

Second, borrowers in SAVE benefit from a more generous payment formula than those enrolled in IDR. Specifically, their payment is the counterpart of equation (4):

$$P_{ilt}^{SAVE} = \theta_{il}^{SAVE} \times \max(Y_{it} - 2.25 \times FPL_{it}, 0). \quad (11)$$

Three differences stand out: first, the increase in the poverty line threshold, second, the removal of the Standard Plan as the maximum payment amount,[6] third, $\theta^{SAVE}$.

Under SAVE, both $\theta$ and the time to forgiveness depend on the share of initial balances attributable to graduate and undergraduate education. To classify loans under these two categories and calculate their weight in each borrower's student debt portfolio, we rely on the fact that for each borrower we observe: a specific number of loans, their age when they exited the educational program the loan is associated to, and whether the borrower completed said program. If the borrower is the head of the household or their partner, we also observe their education level. We distinguish four cases:

**College dropouts:** All their loans are associated to undergraduate programs.

**Undergraduate degree holders:** All loans associated with completed educational programs are classified as undergraduate. All loans associated with incomplete educational programs are classified as graduate.

**Graduate degree holders:** All loans associated with a program completed before age 24 are classified as undergraduate. All remaining loans are graduate.

**Children:** All loans that are not associated with the head of household or their partner are classified as undergraduate loans.

Once sorted, we sum initial balances within each category (undergraduate and graduate) and calculate the weight of each within each borrower's student debt portfolio.

[6] As was the case with interest subsidization, REPAYE also does not have a capped maximum payment. Again, we abstract from modeling this in the baseline specification due to a lack of identifying variables.

### C. Simulation

*Future earnings*. Initial household income is equal to the *norminc* variable in the SCF. We assume that log earnings follow a random walk:

$$\ln(Y_{it+1}) - \ln(Y_{it}) = g_E + g_P + \sigma_E \epsilon_{it}, \tag{12}$$

where $g_E$ is the growth rate of earnings, $g_P$ is the inflation rate, and $\sigma_E$ is the standard deviation of normally distributed permanent income shocks.

For our initial simulation from 2019 to 2024 we use each year's observed federal poverty line, based on household size. Thereafter, we use the 2024 value and assume it evolves as defined by:

$$\ln(FPL_{it+1}) - \ln(FPL_{it}) = g_P. \tag{13}$$

*Calibration*. Inflation rate is set to $g_P = 2\%$. The nominal discount rate is equal to the risk-free rate $r_d = 3\%$. The volatility of permanent income is assumed to be $\sigma_E = .15$.[7] We estimate expected future payments by averaging 100 different 25-year simulated repayment paths for each borrower. Finally, we sum the present value of expected cash flows within each household.

## V. RESULTS

This section presents our main results. First, we start by estimating the discounted payment savings from the debt moratorium. Second, we show how borrowers will benefit from the change in repayment rules from the introduction of SAVE. Finally, we study the savings from policies forgiving $10,000, both targeted and untargeted, with and without SAVE.

### A. Implicit Moratorium Forgiveness

The implicit forgiveness from the moratorium reduced the present value of future payments for many borrowers. Figure 3 shows the per capita balances and present values of expected payments by income decile. Panel A shows the present values of payments in 2024, considering the moratorium. Panel B shows the same present values under a counterfactual scenario in which IDR "clocks" were paused during the moratorium. In that counterfactual case, borrowers would have more remaining

[7] Catherine and Yannelis (2023) perform similar simulations and find that while the parameters change the magnitude of the regressivity of certain policies, the overarching narrative remains that student loan balance forgiveness is regressive.

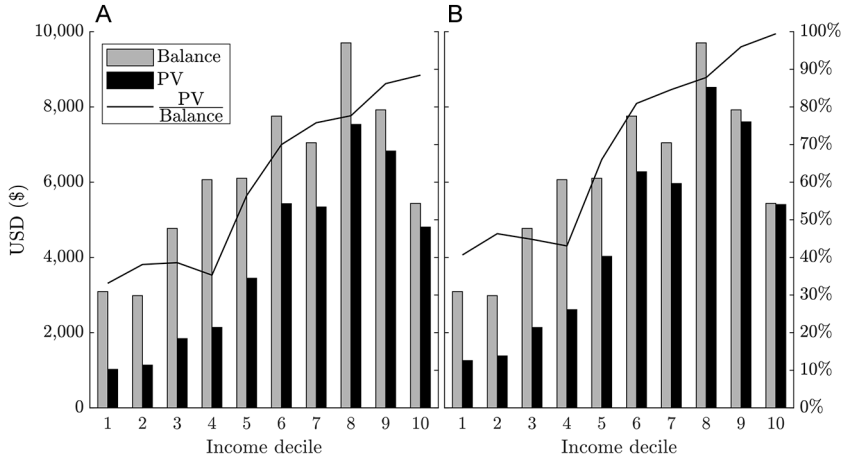


**Figure 3.** Present value of student loan with and without the moratorium. (A) With moratorium forgiveness. (B) Counterfactual with no moratorium forgiveness. This figure presents the per capita (including nonborrowing adults) balances and present value of payments of student debt in 2024 by income decile. Panel B plots per capita balances and present values of the same loans as Panel A if the moratorium had paused the count of payments toward forgiveness in IDR.

years of payment under IDR, and their debt would therefore have a higher present value.

Panel A of Figure 4 represents this difference, showing how much borrowers gained from "clocks" not being paused during the moratorium. The solid black line represents these savings as a percentage of the counterfactual present value. In relative terms, the moratorium effectively forgave a greater share of the student debt at the bottom of the income distribution. However, in dollar terms, the opposite is true because high earners have more student debt and because each dollar of debt has a higher present value at the top of the income distribution than at the bottom.

The moratorium also benefited borrowers because it coincided with a period of high inflation. That inflation depreciated the real value of student loans while most borrowers were not making payments. To evaluate the combined effect of inflation and the reduction in years of payments, we compared the difference between the present value of the loan in 2024 and counterfactual values, assuming that the moratorium months did not count toward forgiveness, and adjusted this counterfactual present value for the growth of the Consumer Price Index (CPI) between the beginning and the end of the moratorium period. This adjustment would have effectively protected lenders from the real depreciation of debt during the moratorium. As Panel B of Figure 4 shows, this increases the benefits from the moratorium considerably. Once the effect of inflation is taken into account, the benefits of the moratorium are also more tilted toward the upper part of the earnings distribution, which has more student debt.

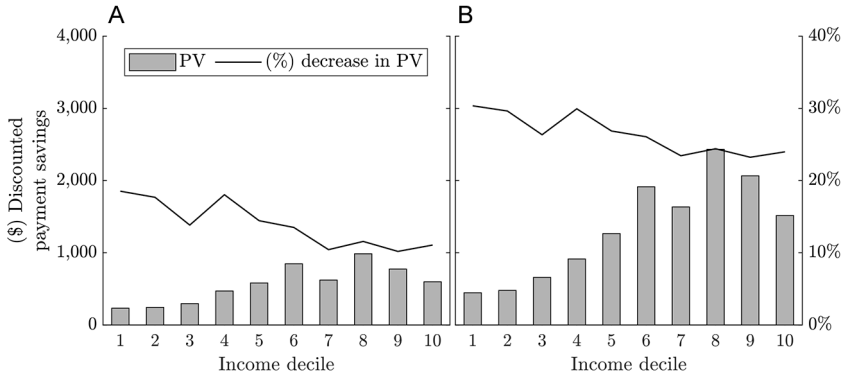


**Figure 4.** Savings from moratorium forgiveness. (A) Nominal moratorium savings. (B) Real moratorium savings (inflation adjusted). This figure plots the per capita (including nonborrowing adults) discounted payment savings caused by the fact that every month during the moratorium counted toward forgiveness under IDR. In Panel A, savings in dollars are computed by subtracting the present values of Figure 3, Panel B from that of Panel A. Savings in percentage terms are the decrease in present values caused by the moratorium forgiveness. In Panel B, we compute the discounted payment savings relative to a counterfactual scenario in which the months of the moratorium did not count toward forgiveness and the value of the debt was indexed to the CPI.

## B. Effect of SAVE on Present Values

Figure 5 plots the distributional effects of the introduction of SAVE. Specifically, we compare the discounted payment savings of compulsory enrollment in IDR (in gray) and compulsory enrollment in SAVE (in black) relative to the status quo. In net, compulsory enrollment in IDR generates discounted payment savings for borrowers who would be better off in IDR but are repaying their loan through the standard 10-year plan. The savings from compulsory enrollment in SAVE are much larger because they combine the benefits of mandatory enrollment with the advantages of more generous repayment rules under the SAVE program, which also benefit current IDR enrollees.

As Table 1 illustrates, SAVE is more generous than previous IDR plans along several dimensions. Figure 6 breaks down how each additional component of SAVE benefits each income decile on aggregate compared to the status quo. Specifically, we introduce the different changes in repayment rules step-by-step to compute the contribution to the discounted payment savings reported in Figure 5. We decompose the policy changes in four steps.

First, SAVE increases the poverty line repayment threshold to 225 percent of the federal poverty line, and payments are no longer capped by the Standard Plan payment. After these changes, the IDR repayment equation (4) becomes

$$P_{ilt}^{\text{SAVE}_1} = \theta_{il}^{\text{IDR}} \times \max(Y_{it} - 2.25 \times \text{FPL}_{it}, 0). \tag{14}$$

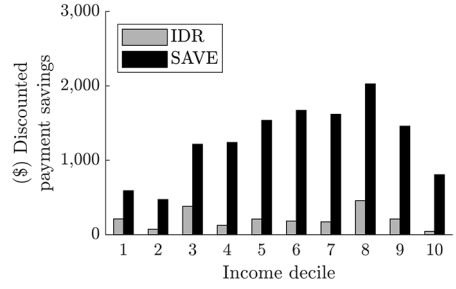


**Figure 5.** Discounted payment savings from compulsory enrollment in IDR or SAVE. This figure displays the per capita (including nonborrowing adults) discounted payment savings from compulsory enrollment IDR or SAVE.

Second, SAVE reduces the percent of discretionary income charged, such that the repayment formula becomes

$$P_{ilt}^{SAVE_2} = \theta_{il}^{SAVE} \times \max(Y_{it} - 2.25 \times FPL_{it}, 0). \quad (15)$$

Third, SAVE changes the number of years of payments before forgiveness. The length of the repayment period depends on the total initial balance and the amount of graduate loans.

Last, the fourth policy adds interest subsidization to the evolution of balances to arrive at the existing SAVE plan.

For most of the distribution, the increase in the repayment threshold is the most significant source of discounted payment savings. In particular, this policy change generates roughly two-thirds of the gains in the lower tercile of the earnings distribution. Relative to IDR, this change cuts payments to zero for borrowers whose earnings fall between 150 and 225 percent of the federal poverty line. Mechanically, the savings from this policy change dissipate for individuals earning above the new threshold.

On the other hand, the change in the percentage of discretionary income being paid represents a greater share of savings in the upper half of the income distribution. The reasons are twofold. First, borrowers at the bottom of the income distribution are more likely to have scheduled payments of zero or near zero. In other words, they are unaffected by the change due to the high poverty line threshold implemented. Second, 84 percent of borrowers now pay at lower rates. Thus, for those who are essentially guaranteed to make payments in every period, that is, those with higher incomes, this becomes of great importance.

In terms of the savings from the change in the forgiveness timeline, they are relatively constant across the income distribution but represent a greater share of savings in the top quintile of the income distribution. This finding echoes previous results by Catherine and Yannelis (2023), showing that reductions in the length of the repayment period disproportionately benefit high earners.

Last, interest subsidization makes negligible differences across the entirety of the income distribution. This finding shows that this policy change will not be costly to

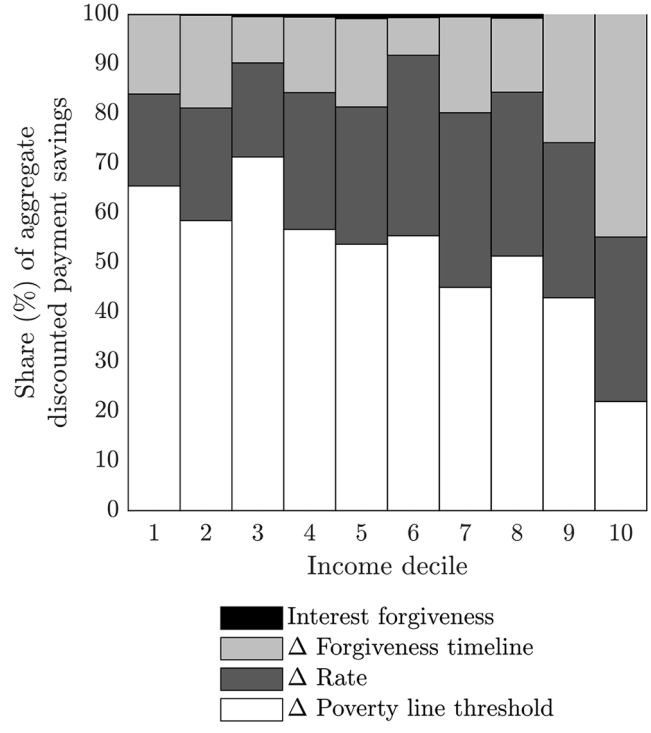


**Figure 6.** Breakdown of savings from compulsory SAVE enrollment. This figure estimates the percentage share of aggregate by-decile discounted payment savings from compulsory enrollment in SAVE by policy innovation. Each component builds upon the last to transition from IDR to SAVE repayment rules. The first component maintains all old features, but increases the payment threshold to 225 percent of the poverty line and eliminates the fixed-payment cap. The second component adds the change in the fraction of discretionary income due in accordance with SAVE rules. The third component changes the forgiveness timeline based on the total amount initially borrowed and graduate school participation. The last component adds the subsidization of interest. The savings from each component are divided by the total savings from the transition from the status quo to SAVE.

taxpayers. While on aggregate it does not benefit borrowers from a present value perspective, it should prevent situations where negative amortization generates very large balances, reducing borrowers' access to the financial system and causing psychological distress.

## C. Partial Balance Forgiveness

Up to now, we have only discussed policies surrounding IDR plans. And, despite the Supreme Court's negative ruling on balance forgiveness efforts, there are still ongoing policy discussions surrounding balance forgiveness through other legal

avenues. As such, it remains important to understand the potential distributional effect of balance forgiveness policies. Figure 7 shows the distributional impact of forgiving $10,000 to all borrowers, or to those whose household per capita income falls below $125,000, as originally proposed by the Biden administration. We abstain from the Pell Grant component due to a lack of data; our estimates serve as conservative estimates within our sample. However, considering that 67 percent of borrowing households in the bottom four deciles already have present values below $10,000, including this added forgiveness component could potentially further skew the distribution of savings under targeted balance forgiveness.

In both panels, we also report the combined discounted payment savings from forgiving $10,000 and compulsory enrollment in SAVE. As we can see, the inclusion of an IDR plan in forgiveness discussions allows for a slightly more uniform distribution of savings.

## D. Summary of Policy Simulations

To conclude the presentation of our results, Table 2 serves as a summary of the paper's analysis. It displays the discounted payment savings from the different policies we analyzed by decile of income. We report these savings in dollars per capita (inclusive of nonborrowers), in the aggregate for each decile, and as a percentage of the overall cost to taxpayers.

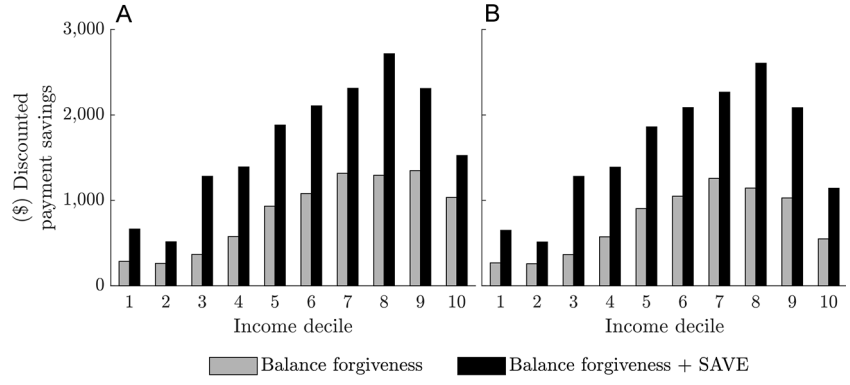


**Figure 7.** Discounted payment savings from partial forgiveness. (A) $10K forgiveness. (B) Targeted $10,000 forgiveness. This figure displays the per capita (including nonborrowing adults) discounted payment savings from several forgiveness policies by income decile. Panel A plots the results under unconditional $10,000 balance forgiveness. Panel B plots estimates under targeted $10,000 balance forgiveness as originally announced by the Biden administration. Qualifying borrowers are those whose per capita household income falls below $125,000. To calculate the discounted payment savings, payment trajectories are re-estimated with the assumed lower counterfactual balances as of 2024. The "Balance forgiveness" specification assumes status quo IDR rules. The "Balance forgiveness + SAVE" specification reports the combined savings from forgiving $10,000 and compulsory enrollment in SAVE, relative to the status quo.

## Table 2

Discounted Payment Savings from Different Policies 2024

| | Per Capita ($) | | | | | Total Cost ($ Bn.) | | | | | Share of Gains (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Balance | | IDR | | Hybrid | Balance | | IDR | | Hybrid | Balance | | IDR | | Hybrid |
| Decile | Full | 10K* | IDR | SAVE | 10K* + SAVE | Full | 10K* | IDR | SAVE | 10K* + SAVE | Full | 10K* | IDR | SAVE | 10K* + SAVE |
| 1 | 1,024 | 268 | 212 | 591 | 650 | 11.8 | 3.1 | 2.4 | 6.8 | 7.5 | 2 | 3 | 9 | 4 | 4 |
| 2 | 1,137 | 259 | 73 | 473 | 513 | 14.2 | 3.2 | 0.9 | 5.9 | 6.4 | 3 | 3 | 3 | 4 | 3 |
| 3 | 1,841 | 366 | 382 | 1,216 | 1,282 | 25.1 | 5.0 | 5.2 | 16.6 | 17.5 | 5 | 5 | 19 | 10 | 8 |
| 4 | 2,140 | 574 | 126 | 1,240 | 1,389 | 28.5 | 7.7 | 1.7 | 16.5 | 18.5 | 5 | 8 | 6 | 10 | 9 |
| 5 | 3,446 | 904 | 210 | 1,537 | 1,861 | 45.5 | 11.9 | 2.8 | 20.3 | 24.6 | 9 | 12 | 10 | 12 | 12 |
| 6 | 5,428 | 1,049 | 183 | 1,671 | 2,087 | 72.5 | 14.0 | 2.4 | 22.3 | 27.9 | 14 | 14 | 9 | 13 | 13 |
| 7 | 5,341 | 1,257 | 172 | 1,619 | 2,268 | 72.1 | 17.0 | 2.3 | 21.8 | 30.6 | 14 | 17 | 8 | 13 | 15 |
| 8 | 7,535 | 1,144 | 458 | 2,027 | 2,607 | 103.0 | 15.6 | 6.3 | 27.7 | 35.6 | 20 | 16 | 23 | 17 | 17 |
| 9 | 6,828 | 1,029 | 211 | 1,459 | 2,085 | 91.4 | 13.8 | 2.8 | 19.5 | 27.9 | 17 | 14 | 10 | 12 | 13 |
| 10 | 4,806 | 549 | 44 | 806 | 1,143 | 60.6 | 6.9 | 0.6 | 10.2 | 14.4 | 12 | 7 | 2 | 6 | 7 |
| All | 4,013 | 751 | 210 | 1,283 | 1,613 | 524.7 | 98.2 | 27.4 | 167.7 | 210.9 | 100 | 100 | 100 | 100 | 100 |

Note: Table 2 reports the per capita, total, and share (%) of discounted payment savings of several policies by household income decile, including all nonborrowing adults in our sample. Balance policies refer to either the forgiveness of the present value of all expected future payments or the discounted payment savings after applying targeted $10,000 balance forgiveness (10K*) to all borrowers whose household adult-per-capita income falls below $125,000. The IDR column refers to policies considering compulsory enrollment of all borrowers in traditional IDR plans and the Biden administration's SAVE plan. Last, the Hybrid column considers the joint policy of targeted $10,000 balance forgiveness plus compulsory enrollment in SAVE.

Importantly, our results focus on a historically abnormal sample: borrowers who had graduated by 2019 and who benefited from the COVID-19 moratorium. It is the same sample as in Catherine and Yannelis (2023), but updated to account for one year of payment and the moratorium. As explained in Subsection V.A, the moratorium did not simply freeze student debt but reduced its present value substantially. This reduction in the present value of loans explains why the savings from full and partial forgiveness are lower than those reported in Catherine and Yannelis (2023).

With the caveat that it misses borrowers who graduated since 2019, this analysis is representative of the current situation. However, it remains interesting to consider the distributional effects of forgiveness policies and SAVE in a sample that did not benefit from the moratorium. To do so, Table 3 recreates the entirety of the paper's analysis through the lens of the counterfactual world, where IDR "clocks" were paused during the moratorium. Overall, our results are consistent across the two samples.

## VI. COST OF DEBT AND BORROWING INCENTIVES

Our analysis of the new IDR rules focuses on the current stock of student debt. However, because the new rules are substantially more generous, they are likely to encourage more students to borrow and lead each borrower to accumulate larger balances over the course of their studies. A simple numerical example can illustrate how changes in the parameters of the IDR plan change the expected cost of debt for borrowers.

Column 1 of Table 4 considers the example of an undergraduate student who expects to graduate in 2024 and earn $60,000 a year after graduation. Under the new IDR rules (i.e., SAVE), the student will be required to pay at most 5 percent of their discretionary income toward repaying their debt. The discretionary income will be defined as the share of their earnings above 225 percent of the federal poverty rate, that is, $\$60{,}000 - 2.25 \times \$15{,}060 = \$26{,}115$ for a single adult without children. It follows that their maximum yearly payment will be around $1,306 per year, or $26,115 over a 20-year period. Consequently, as expected, any debt in excess of $26,115 would be forgiven. This is substantially less than the aggregate limits of undergraduate debt: $31,000 or $57,500 for dependent and independent students, respectively.

The consequence of this simple calculation is that above a certain level of debt, the effective interest rate on the marginal dollar becomes negative, and students would leave money on the table by not borrowing as much as they could. In this simple example, we abstract from the growth in earnings over the life cycle, which would increase the ability to repay student debt, but we also overlook the time value of money and the fact that children will reduce student debt payments by increasing the applicable federal poverty line. As Column 2 shows, adding a second

## Table 3

Discounted Payment Savings from Different Policies 2024 (with No Moratorium Forgiveness)

| | Per Capita ($) | | | | | Total Cost ($ Bn.) | | | | | Share of Gains (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Balance | | IDR | | Hybrid | Balance | | IDR | | Hybrid | Balance | | IDR | | Hybrid |
| Decile | Full | 10K* | IDR | SAVE | 10K*+SAVE | Full | 10K* | IDR | SAVE | 10K*+SAVE | Full | 10K* | IDR | SAVE | 10K*+SAVE |
| 1 | 1,257 | 340 | 225 | 669 | 761 | 14.5 | 3.9 | 2.6 | 7.7 | 8.8 | 2 | 3 | 11 | 5 | 4 |
| 2 | 1,381 | 301 | 71 | 514 | 594 | 17.3 | 3.8 | 0.9 | 6.4 | 7.4 | 3 | 3 | 4 | 4 | 3 |
| 3 | 2,137 | 445 | 339 | 1,275 | 1,398 | 29.2 | 6.1 | 4.6 | 17.4 | 19.1 | 5 | 5 | 19 | 11 | 9 |
| 4 | 2,611 | 689 | 108 | 1,374 | 1,604 | 34.8 | 9.2 | 1.4 | 18.3 | 21.4 | 6 | 8 | 6 | 12 | 10 |
| 5 | 4,028 | 1,066 | 200 | 1,505 | 2,012 | 53.2 | 14.1 | 2.6 | 19.9 | 26.6 | 9 | 12 | 11 | 13 | 12 |
| 6 | 6,276 | 1,220 | 166 | 1,646 | 2,256 | 83.9 | 16.3 | 2.2 | 22.0 | 30.2 | 14 | 14 | 9 | 14 | 14 |
| 7 | 5,963 | 1,500 | 134 | 1,489 | 2,414 | 80.5 | 20.2 | 1.8 | 20.1 | 32.6 | 13 | 17 | 8 | 13 | 15 |
| 8 | 8,520 | 1,377 | 353 | 1,870 | 2,737 | 116.4 | 18.8 | 4.8 | 25.6 | 37.4 | 19 | 16 | 20 | 16 | 17 |
| 9 | 7,602 | 1,181 | 175 | 1,114 | 1,984 | 101.7 | 15.8 | 2.3 | 14.9 | 26.5 | 17 | 14 | 10 | 9 | 12 |
| 10 | 5,405 | 620 | 39 | 526 | 997 | 68.1 | 7.8 | 0.5 | 6.6 | 12.6 | 11 | 7 | 2 | 4 | 6 |
| All | 4,586 | 887 | 183 | 1,216 | 1,702 | 599.6 | 116.0 | 23.9 | 158.9 | 222.5 | 100 | 100 | 100 | 100 | 100 |

Note: Table 3 reports the per capita, total, and share (%) of discounted payment savings of several policies by household income decile, including all nonborrowing adults in our sample. Balance policies refer to either the forgiveness of the present value of all expected future payments or the discounted payment savings after applying targeted $10,000 balance forgiveness to all borrowers whose household adult-per-capita income falls below $125,000. The IDR column refers to policies considering compulsory enrollment of all borrowers in traditional IDR plans and the Biden administration's SAVE plan. Last, the Hybrid column considers the joint policy of targeted $10,000 balance forgiveness plus compulsory enrollment in SAVE.

**Table 4**

Examples of Lifetime Repayment Capacity before and after SAVE (in Dollars)

| | New Rules — SAVE | | | Old Rules — IDR | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Earnings ($) | 60,000 | 60,000 | 57,500 | 60,000 | 60,000 | 57,500 |
| Poverty line ($) | 15,060 | 20,440 | 20,440 | 15,060 | 20,440 | 20,440 |
| Discretionary income ($) | 26,115 | 14,010 | 11,510 | 37,410 | 29,340 | 26,840 |
| Yearly maximum payment ($) | 1,306 | 701 | 576 | 3,741 | 2,934 | 2,684 |
| Total maximum payment ($) | 26,115 | 14,010 | 11,510 | 74,820 | 58,680 | 53,680 |

Note: Table 4 presents a simple numerical example illustrating how changes in the parameters (besides time to forgiveness) of the IDR plan change the expected cost of debt for borrowers.

person to the family would reduce payments over a 20-year period from $26,115 to $14,010.

To measure the magnitude of the policy change, we analyze the same numerical example under previous IDR rules in Column 4. Under previous rules, payments represented 10 percent of discretionary earnings, which started at 150 percent above the federal poverty line. This means that the median college graduate could pay up to $3,741 per year, or $74,820 over 20 years. This repayment capacity was substantially above aggregate student debt limits. Consequently, the IDR plan did not reduce the effective cost of borrowing for students whose postgraduation earnings aligned with the typical trajectory of college graduates. Instead, this calibration of the program's parameters protected students against the risk of earning substantially less than they expected, and thus pooled the risk of their investment across borrowers.

An additional source of concern is that the student debt program will be further destabilized by an increase in adverse selection. The expected cost of debt to borrowers will not change much for students from top engineering or economics programs. On the other hand, the cost of debt will plummet for college majors with the lowest earnings. For example, Column 3 considers the case of a sociology major making $57,500[8] per year over the first 20 years of their career, with one dependent child. Over the course of these 20 years, this borrower will be able to make at most $11,510 in total payments under the new rules. Consequently, this borrower could borrow $31,000 and only repay a third of that amount. As Column 6 shows, under the old rules, their earnings would have allowed the government to collect up to $53,680 over the 20 years.

Importantly, it is not clear how much of this fiscal transfer will benefit college students. In theory, the tax incidence of the subsidy will be split between borrowers

[8] The Federal Reserve Bank of New York estimates the median early wage of sociology majors to be $48,000 and their mid-career earnings to be $67,000. We proxy the earnings over the first 20 years after graduation using the mean of these two salaries.

and universities. As the transfers from taxpayers to student debt borrowers increase the demand for higher education, universities may raise tuition to capture part of the surplus, which would aggravate the long-run rise in the cost of higher education in the United States.

## VII. CONCLUDING REMARKS

This paper updates Catherine and Yannelis (2023) and discusses student loan forgiveness proposed and implemented since 2020. The new proposed SAVE plan is more progressive than proposed balance forgiveness policies, such as the one from August 2022 and blocked by the Supreme Court in June 2023. It transfers more to lower- and middle-income student loan borrowers relative to many other proposals, such as debt relief. Still, there remain significant concerns regarding further forgiveness proposals.

While the payment thresholds and rates of the SAVE plan are extraordinarily generous compared to other plans, this translates to more forgiveness for lower-income borrowers, as these loans are potentially forgiven after 10 years rather than 20 or 25. This shorter time to forgiveness actually means that more dollars could be transferred to higher-income borrowers. Many careers have steep earnings trajectories (Hampole, 2024), and providing forgiveness early on can make transfers to borrowers who have high earnings later in life. It is vital in terms of distributional consequences that student loan relief policies take into account the life cycle of earnings.

While the generosity of the SAVE plan is meant to benefit lower-income borrowers, this unprecedented relief leads to concerns about school and borrowers' behavior in the future. There is abundant evidence of the predatory behavior of for-profit colleges in capturing government student loans (Looney and Yannelis, 2015, 2022; Eaton, Howell, and Yannelis, 2020). If many lower-income borrowers do not pay their loans under very generous plans, a possible concern is that for-profit schools capture more in government loans, perhaps splitting rents with students.

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## DISCLOSURES

The authors have no conflicts of interest to disclose in relation to the research presented in this paper.

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