## Budget Model

## Budgetary Cost of Newly Proposed Income-Driven Repayment Plan

Summary: We estimate President Biden's newly proposed Income-Driven Repayment (IDR) Plan will cost between $\$ 333$ to $\$ 361$ billion over the 10-year budget window, more than twice as much as the cost estimate released by the Biden Administration. These costs are in addition to the one-time cost of direct loan forgiveness that we previously estimated at $\$ 469$ billion.

## Key Points

- The Department of Education (ED) released detailed regulations on amending the terms of the Revised Pay As You Earn (REPAYE) plan, creating the most affordable Income-Driven Repayment (IDR) plan that has ever been made available to student loan borrowers. ED estimates the cost to be $\$ 138$ billion over 10 years under strict "static" assumptions where student take-up rates are the same for existing programs and student borrowing behavior remains unchanged. Under these same assumptions, we estimate a cost of around $\$ 141$ billion, close to ED's cost estimate.
- However, we estimate that the IDR take-up rate will increase from $33 \%$ to between $70 \%$ to $75 \%$ of eligible loan volumes. We estimate that the cost of the IDR program is between $\$ 333$ billion to $\$ 361$ billion over the 10-year budget window. Higher costs emerge at higher take-up rates.
- These estimates do not yet include the effects of students increasing their borrowing, which is subject to future research.


## Introduction

On January 10th, the Department of Education released the details on the newly proposed Income-Driven Repayment Plan, first introduced as part of President Biden's student loan forgiveness plan in August last year. The revamped IDR plan proposed the following major changes to the current federal student loan repayment program system:

- Increase income protection: Increase the amount of income exempted from the calculation of the borrower's payment amount from 150 percent of the applicable poverty guideline to 225 percent of the applicable poverty guideline.
- Lower mandate share of discretionary income: Lower the share of a borrower's discretionary income that must be applied toward monthly payments. Borrowers with only outstanding loans for an undergraduate program will pay 5 percent of their discretionary income. Borrowers that have outstanding loans for undergraduate and graduate programs will pay between 5 and 10 percent based upon the weighted average of their original principal balances attributable to those different program levels.
- Shorten repayment period: For borrowers with an original loan principal balance below $\$ 12,000$, the remaining loan balance would be forgiven after 10 years. For every additional $\$ 1,000$ of balance, the term towards forgiveness would add another year, up to a total of $20-25$ years, depending on the borrowers' loan status.
- Cease interest accrual: As long as borrowers are making payments on time, any remaining accrued interest not covered by their monthly payment will not be added to their balance.
- Automatically enroll borrowers with late payments: Automatically enroll a borrower into the IDR plan that produces the lowest monthly payment for which the borrower is eligible if the borrower is 75 days or more past due on their loan payments.
- Simplify application and annual income recertification procedure: When the Department of Education has the borrower's approval, it will rely on tax data to provide a borrower with a monthly payment amount.

The Department of Education published their estimated budgetary cost of $\$ 137.9$ billion over the next decade. However, their estimate did not consider potential borrowers switching from non-IDR plans into IDR plans due to the more generous features of the new IDR plan. Taking this factor into account, our estimates provide a range of potential budgetary cost for the government over the 10-year budget window starting in 2023.

## Conventional Costs

Table 1 reports the estimated 10 -year budget window cost ranges of the newly proposed IDR plan, assuming different ranges of new program's take-up rates. The program would cost around $\$ 141$ billion over the next decade, if federal student loan borrowers do not have any behavioral response and stay exactly the current IDR plan take-up rate as shown in Table 2. ${ }^{1}$ This estimate is almost the same as that of the Department of Education.

Table 1 also reports the costs estimates once we take into account that more borrowers will enroll in IDR due to its more generous new features. The budgetary costs increase to between $\$ 333$ billion and $\$ 361$ billion over the 10-year budget window. However, budgetary costs could increase to $\$ 471$ billion with even higher take-up rates. The Appendix discusses the data and methodology in more detail, including the variation in take-up rates based on borrower behavior.

Table 1. Conventional Budget Estimates of the New Income-Driven Repayment Plan, FY2023-2032

## Billions of dollars

DOWNLOAD DATA

| Provision | Year |  |  |  |  |  |  |  |  |  | Budget <br> Window |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |  |
| New IDR, static take-up rate of 33 percent* | 86.3 | 5.3 | 4.9 | 5.0 | 5.4 | 6.3 | 6.4 | 6.6 | 7.1 | 7.6 | 140.9 |
| New IDR, takeup rate of 70.3 percent | 210.8 | 12.0 | 11.3 | 11.4 | 12.1 | 14.0 | 14.2 | 14.7 | 15.5 | 16.5 | 332.6 |
| New IDR, takeup rate of 74.5 percent | 228.5 | 13.1 | 12.2 | 12.4 | 13.2 | 15.2 | 15.4 | 16.0 | 16.9 | 18.0 | 360.8 |

New IDR, take-
$\begin{array}{lllllllllllll}\text { up rate of } 90.9 & 297.5 & 17.1 & 16.0 & 16.2 & 17.3 & 19.9 & 20.2 & 20.9 & 22.1 & 23.6 & 470.8\end{array}$ percent
(*) by volume

## Factors Driving Up Take-Up Rate

The new IDR program has direct financial benefits as outlined above. We will now discuss some of other factors including simplification and convenience.

## Simplified application and recertification

Application procedure plays an important role in the IDR take-up rate. Mueller and Yannelis (2022) finds out that simplifying the application procedure could increase enrollment by 2.3 times. Moreover, income recertification for IDR plans is currently quite burdensome and time-consuming, which discourages IDR participants from re-enrolling into the plan for the following period. Since the Department of Education would now be able to access IRS tax information, income recertification would be automatic, which might cause the future IDR enrollment rate to reach a higher level.

Department of Education data from 2019 show that 39 percent of borrowers on an IDR plan recertified on time and that only 57 percent had certified within 6 months after their recertification deadline. Herbst (2023) shows the low recertification rate is likely due to the burdensome income-recertification process. Most borrowers fail to re-enroll in IDR after one year and quickly return to their previous repayment patterns, meaning the actual increase in cash-on-hand through IDR is remarkably short-lived.

## Preventing unpaid interest accumulation

The Department of Education student loan ombudsman reports that interest accrual and capitalization commonly lead to borrower confusion and complaints. Furthermore, Pew Research Center focus groups highlight that rising balances create frustration and can act as a disincentive for borrowers to continue repaying. With the new feature of removing interest accumulation, the take-up rate for the IDR plan would be driven up substantially.

## Automatically enroll borrowers with late payments

IDR would become the default plan for borrowers with payments that are at least 75 days late. Currently the default repayment plan for any student borrower is the standard fixed-payment plan. Switching the default option to IDR plan for some borrowers could greatly increase enrollment in IDR plans. For example, Cox et al. (2020) shows that borrowers are heavily influenced by the default (i.e., status quo option) repayment plan when making their initial choice of plans. Using an incentivized lab experiment, the authors find that hypothetical enrollment in the Standard (10-year, mortgage-style) repayment plan drops by nearly half (from $63 \%$ to $34 \%$ ) when the default option is changed from the Standard plan to an IDR plan. Purely informational interventions had much smaller effects, a theme echoed elsewhere in the financial aid take-up literature.

## Future Work

Aside from the expected increase in the IDR take-up rate, there are several other factors that we will continue to examine in our future analysis. These include:

- Students increasing their total borrowing that would qualify for the new IDR program. For example, Adam Looney (2022) estimates that students in 2016 borrowed only 31 percent of the potential capacity, a value that the estimates presented above also assume. In practice, student borrowers would have an incentive to increase their borrowing, which we plan to estimate in future work.
- The potential for colleges to increase tuition prices. Previous evidence (known as the "Bennett Hypothesis") suggests that tuition prices increase in response to government subsidies. Our future work will attempt to estimate this price increase.
- The impact IDR will have on enrollment and graduation. The new IDR program could increase college enrollment and increase graduation rates since the enhanced subsidy would not be fully captured by colleges (per the last point). Such dynamics could increase IDR costs, although some of those costs would be offset by higher future tax revenue due to the college wage premium. At the same time, increased enrollment and graduation would likely not produce the same wage premium due to selection effects (see, for example, evidence presented in Looney and Yannelis (2019) of a previous expansion in loan credits).


## Appendix: Methodology Overview

We estimate FY2023-2032 budgetary cost for the new proposed IDR in several steps.
First, we estimate Biden's student loan forgiveness plan cost for year 2023 following the methodology framework described in our previous brief. After that, we subtract the amount that got cancelled from the current FY2022 Q4 Federal student loan balance to get our new baseline student loan vintage amount. Based
on the debt portfolio by debt size, we calculate budgetary cost introduced by the newly proposed IDR plan by applying different ranges of take-up rates relative to the current IDR programs take-up rates shown in Table 2.

Table 2. Income-driven Repayment Program Current Take-Up Rates By Debt Size, FY2023

DOWNLOAD DATA

| Debt Size | Income-driven repayment <br> program current take-up rate |
| :--- | :---: |
| Less than $\$ 5 \mathrm{~K}$ | $5 \%$ |
| $\$ 5 \mathrm{~K}$ to $\$ 10 \mathrm{~K}$ | $8 \%$ |
| $\$ 10 \mathrm{~K}$ to $\$ 20 \mathrm{~K}$ | $14 \%$ |
| $\$ 20 \mathrm{~K}$ to $\$ 40 \mathrm{~K}$ | $21 \%$ |
| $\$ 40 \mathrm{~K}$ to $\$ 60 \mathrm{~K}$ | $30 \%$ |
| $\$ 60 \mathrm{~K}$ to $\$ 80 \mathrm{~K}$ | $35 \%$ |
| $\$ 80 \mathrm{~K}$ to $\$ 100 \mathrm{~K}$ | $36 \%$ |
| $\$ 100 \mathrm{~K}$ to $\$ 200 \mathrm{~K}$ | $42 \%$ |
| $\$ 200 \mathrm{~K}+$ | $50 \%$ |

Notes: PWBM calculation based on FY2022 Q4 federal education debt portfolio and income-driven repayment programs portfolio data from the U.S. Department of Education.

To estimate the potential ranges of the increase in people switching from non-IDR plans to IDR plan, we use the Beginning Postsecondary Students Longitudinal Study (BPS) 2012/2017 cohort data from National Center for Education Statistics (NCES). The data contains detailed information on federal student loan borrowing as well as student income and family size, evolving information at the end of years one, three, and six for cohorts of first-time, beginning students after starting their postsecondary education, which keeps track of both college graduates and drop-out students' outcomes.

To estimate the potential change in the new IDR take-up rate, we calculate each student loan borrower's monthly repayment amount under the standard repayment plan, the current IBR plan, the current PAYE plan, the current REPAYE plan, as well as the newly proposed IDR plan. We assume that recent graduate incomes grow at 7 percent annually, ${ }^{2}$ and we impute the values of students' income in years three and six with the weighted average value of the cohort using the survey point estimate weight. For each IDR plan, we keep track of the debt amount remaining at each year end until either the debt is fully repaid or gets forgiven according to the specific plan rules. Then, we calculate the optimal choice of each borrower based on three different optimizing goals: lowest present value of all payments (adopted by Department of Education (2023)), lowest monthly payment (adopted by GAO (2022)), and the lowest total amount repaid (adopted by GAO (2022)). The calculated aggregate take-up rates for the new IDR plan are shown in Table 3. We then apply these new aggregated take-up rates to our scoring framework for FY2023 on the new baseline loan vintage amount and the projected future annual federal student loan disbursements in FY2024-2032.

Table 3. New Income-driven Repayment Program Estimated Take-Up Rates, FY2023 2032

DOWNLOAD DATA

| Borrower Optimizing Assumption | New IDR plan take-up <br> rate |
| :--- | :---: |
| Borrowers minimize present value of payments | $70.3 \%$ |
| Borrowers minimize monthly payments (liquidity <br> constrained) | $74.5 \%$ |

Borrowers minimize total payments ("behavioral economics")

Notes: PWBM calculation based on NCES BPS 2012-2017 cohort data.

The baseline subsidy rate for current IDR plans is 17 percent, which we estimated using the 2019 Survey of Consumer Finances (SCF) data and is largely in line with GAO's 2016 report as well as CBO's 2020 report. Calculated using the BPS data, the increased generosity of proposed rules would impose about 20 percent increase of IDR subsidy rate. For borrowers who switch from standard payment plan to IDR plan, the baseline subsidy rate is around -13 percent (CBO's 2020 report) to -25 percent (estimated using BPS 2012/2017 data), which means they were projected to produce revenue to the government originally. For eligible loan balances that were already enrolled in the current IDR plan, we calculate the cost using only the increase of the IDR subsidy rate. For loan balances that are projected to switch from a non-IDR plan to the new IDR plan, we add up the original projected revenue as well as the updated cost increase due to the higher IDR subsidy rate.

This analysis was produced by Junlei Chen under the guidance of Kent Smetters. PWBM staff provided additional support. Mariko Paulson prepared the brief for the website.

1. This estimate is analogous to our previous estimated IDR cost $\$ 70.3$ billion over the budget window but it also accounts for the newly proposed regulations and assumes Biden's student loan forgiveness occurs just one time in 2023.
2. This assumption is based on data of recent graduates, as estimated by GAO (2022). The take-up rates would increase even more using a lower growth rate.
