

Estimating the effect of employer matching contributions offsetting student loan debt

Introduction

The SECURE 2.0 Act of 2022 contained numerous measures intended to enhance Americans' retirement security, one of which offers workers with outstanding student loans the opportunity to repay the loans and receive matching employer contributions in their tax-qualified retirement plans. The growth in defined contribution (DC) plans—especially 401(k)s where employees can decide how much to contribute and often receive employer matching contributions—makes it increasingly important to recognize that close to 50 million Americans owe over \$1.75 trillion in student loan debt, and most young workers start their work lives facing the heavy burden of these obligations. To mitigate the concern that indebted workers may be unable to save in their employer-provided pension accounts, the new policy in effect from 2024 is intended to let employees repay these loans more quickly without undermining the growth of their retirement accounts. Whether workers will achieve this goal is, as yet, unknown.

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This research investigates how such workers can manage both debt repayment and saving for retirement, so as to maximize their lifetime well-being. Specifically, we offer the first economic assessment of a key aspect of the recent SECURE 2.0 Act of 2022, legislation that allows employer-sponsored matching retirement plan contributions when workers make qualifying student loan payments. Our study first develops a life cycle model embodying key aspects of U.S. tax and benefit regulation, and calibrates it using data from the Survey of Consumer Finances (SCF). Next we show how employees' financial decisions are influenced by employer-sponsored matching contributions to retirement accounts. Our results indicate that this new policy could enhance preretirement consumption by up to 3%. Workers will reduce their own retirement savings by almost 50%, yet this reduction is offset by the higher employer matching contributions in recognition of the loan repayments. We also document that the reform will not produce earlier loan discharge dates, and it will only slightly reduce nonretirement asset balances. Overall, retirement income is not predicted to change materially, and preretirement financial assets outside retirement plans are similar.

Our paper contributes to the rich literature on household finance and dynamic portfolio choice over the life cycle. Our life cycle model incorporates both student loans and incentives for tax-qualified retirement saving in a rich and institutionally realistic structure with uncertain income, capital market returns, and lifetimes, as well as Social Security taxes and benefits. We also consider thresholds, limits, tax rules on contributions to and withdrawals from tax-qualified DC pension plans, and rules for student loan repayments.

To this end, we first review how student loans have operated in the U.S. over the last few decades, along with a brief description of 401(k) plans. Next, we outline the methodological foundations of our life cycle model and describe model calibration. The subsequent section provides results regarding the anticipated impacts of the SECURE 2.0 Act reform on student loan repayment patterns, 401(k) contributions, and accumulated retirement plan wealth, as well as non-tax-qualified financial wealth, all over the life cycle. Following a short discussion of consumption changes, we offer a sensitivity analysis of alternative parameter settings. A final section concludes and draws out implications.

Student loans and tax-qualified retirement plans in the United States

The U.S. student loan market plays a crucial role in enabling individuals to pursue higher education, but, for many

borrowers, it also leads to substantial debt. Around half of U.S. college students rely on such loans, most of which (90%) are loans backed by the federal government, with the remainder offered by private lenders. Student loan interest rates and borrowing limits are set by Congress, with interest rates typically lower than on private loans that do not vary with borrowers' creditworthiness. They also have repayment requirements and consequences for those who fail to meet their repayment obligations. In particular, student loans cannot generally be discharged through bankruptcy.

People can repay their student loans in two ways: the standard repayment plan and the income-driven repayment plan (IDR). The former is similar to a 10-year mortgage: borrowers typically make fixed monthly payments until the student loans are repaid. There are, however, numerous exceptions that allow borrowers to extend their loan maturity, permitting them to make lower regular monthly payments over longer than a decade. For example, under an extended or consolidated loan program, the repayment period depends on the total amount of student loans, and it varies from 10 years (for loans up to \$10,000) to 30 years (for loans of \$60,000 or more). Additionally, under financial hardship or other conditions satisfactory to the lender, a borrower may temporarily suspend a loan for up to five years, during which time the interest continues to accrue. As a result, workers may continue making loan repayments until late in life. It's also possible to repay a student loan early by making a one-time payment without incurring additional fees.

Introduced in 2009, income-driven repayment plans require borrowers to pay between 15% and 20% of their discretionary income (defined as income over 150% of the poverty line); any unpaid balance after 20 to 25 years is discharged. These features vary based on the type of income-driven repayment plan. Even though financial hardship situations are directly included in the repayment formula, temporary suspensions of repayments are also permitted under the IDR program. The importance of these repayment plans has increased significantly in recent years; about 10% of borrowers were in IDR plans in 2013, and a decade later, this number had increased to 32%. The rise of IDR plans is even more notable when measured by the amount of student debt involved. In 2013, 22% of student debt in repayment was in an income-driven repayment plan, while a decade later, it was almost 54%.

Turning to defined contribution (DC) retirement accounts, our model implements the key features of tax-qualified DC plans in the private sector. Federal regulation allows workers to contribute to these plans using pretax income up to certain limits, often with contribution rates set by default. Currently two-thirds (67%) of the private sector workforce

has access to DC plans, wherein employers frequently match employee contributions up to a legally set limit with the most prevalent pattern being dollar-for-dollar or \$0.50 per dollar match. Access to retirement plan assets is restricted and tax-penalized prior to specified ages, and there are also requirements regarding minimum distributions after retirement. To date, these plans have amassed \$37 trillion in DC plans and Individual Retirement Accounts.

Using the nationally representative Survey of Consumer Finances—a detailed cross-sectional dataset on income, assets, debt, and demographic characteristics of U.S. families gathered by the Board of Governors of the Federal

Reserve System—we have computed the fraction of college-educated respondents with access to retirement accounts and an outstanding student loan (see Table 1). Two thirds (62%) of the age 20 – 29 sample had student loans outstanding and held retirement accounts in 2019, and (54%) of those in their 30's. Loan prevalence does decline at older ages, though by their 50's, almost a quarter (24%) of the workers still held student loans alongside retirement accounts, and 11% in their 60's. Hence there is substantial potential for the SECURE 2.0 Act to improve both loan repayments and retirement wellbeing.

TABLE 1. PERCENT OF COLLEGE+ SCF RESPONDENTS WITH ACCESS TO RETIREMENT ACCOUNTS AND HOLDING A STUDENT LOAN

Age	% College educated w/ret account having a student loan
20 – 29	62%
30 – 39	54%
40 – 49	35%
50 – 59	24%
60 – 69	11%
70+	4%
Total	30%

Note: The table reports the percent of college-educated SCF respondents with positive assets in a retirement account (N=2,059) who have a student loan. Retirement accounts include both defined contribution and individual retirement accounts.

Source: Authors' calculations using 2019 SCF data, using sample weights.

Methodology and solution approach

We focus on college-educated workers who both hold student loans and have access to a workplace DC plan. We posit that this individual decides how much to consume and how much to invest in risky stocks, bonds, and a 401(k) plan over a lifetime, taking into account that the individual must make student loan repayments. The worker's well-being depends on consumption and bequests, while facing economic constraints including earnings profile, income and Social Security taxes, and the opportunity to invest in risky stocks and riskless bonds in a DC tax-qualified retirement plan (up to a limit) as well as in a non-tax-qualified account. The worker's lifetime is divided into two phases: work life (age 25 – 66), and retirement (from age 67 – 100). This framework also takes into account the Required Minimum Distribution rules relevant to the U.S. DC setting and a realistic formulation of Social Security benefits and sex-specific mortality.

To be considered as a “safe harbor” DC plan and hence avoid complex nondiscrimination testing, we assume that employers match 100% of employee contributions up to 5% of yearly labor income up to a maximum compensation of $\$M^{\max}$ per year. We solve the optimization problem recursively via backward induction separately for four subgroups using discrete-time dynamic programming: the subgroups are workers with income profiles characteristic of college-educated males and females, with either the standard or income-driven repayment programs.

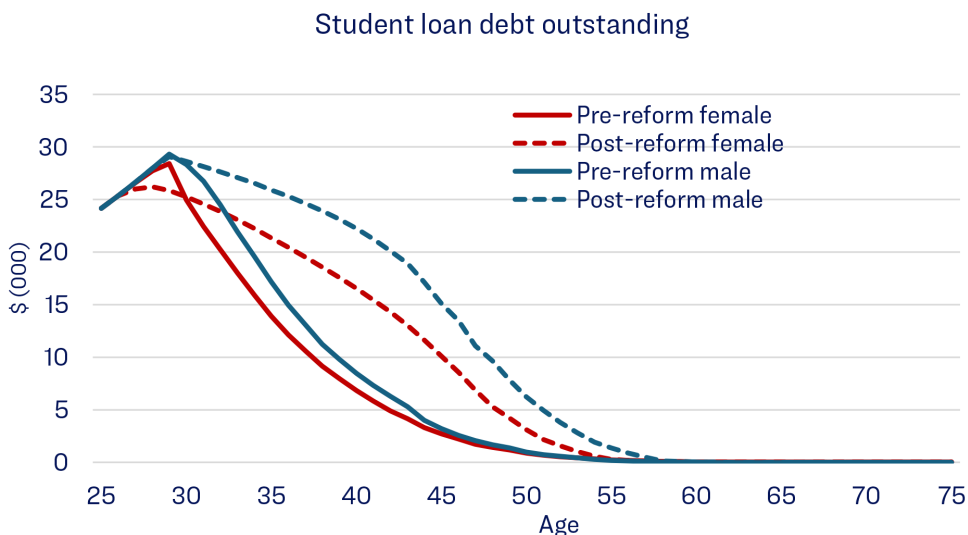
When we compare our simulated and empirical data for college-educated males and females by age, we confirm that our simulated outcomes, both for retirement assets and outstanding student loans are remarkably close.

Results

Figure 1 summarizes our most important findings regarding the time path of student loans outstanding (other results are reported in the full working paper). Here we depict the average amount of outstanding debt by age for men and women before (solid line) and after the reform (dashed line). Prereform, outstanding student loan balances rise until age 30, as many workers suspend their student loan repayments resulting in compound interest effects increasing debt levels. This is also observed after the reform, although the increase in debt is significantly lower (especially for women), due to

their more regular repayments. From age 30 on, average debt levels prereform fall significantly, as suspensions are only possible in hardship situations and workers increasingly make use of one-time repayments. Post-reform, levels of outstanding student debt also fall after age 30, but far more slowly, compared to before the reform. The explanation is that workers make significantly less use of one-time repayments.

FIGURE 1. IMPACT OF THE SECURE 2.0 REFORM ON AVERAGE STUDENT LOANS OUTSTANDING: POST- VERSUS PRE-REFORM



Note: This figure shows the average of 10,000 simulated outstanding student loans for college-educated men and women in the standard repayment program with access to DC retirement accounts by age. Prior to the reform, loan repayments do not receive employer matching DC contributions, while after the reform, repayments are matched (to the legal limits) by employer DC contributions. See Figure 1 for additional modeling assumptions; all dollar values in \$2019.

Source: Authors' calculations.

The major reason that workers post-reform have less incentive to repay their loans early and in full is that self contributions in 401(k) plans fall until age 50, while 401(k) account balances are not significantly lower despite having made lower own contributions. The reason for this lies

in the more generous employer matching contributions. Consequently, total contributions to retirement accounts are similar before and after the reform, which explains why 401(k) account balances differ very little, pre- and post-reform.

Conclusions and implications

This research will interest several key stakeholders in the retirement community. Financial institutions are clearly concerned about savings patterns of millennials and younger workers, so retirement saving can be enhanced by alleviating student debt burdens. An employer match would be voluntarily provided, so plan sponsors must choose to help with these additional loan repayments, and plan service providers will also need to allow this in practice. While such matching contributions will not be cost-free to

plan sponsors, the change could be attractive since student debt is known to contribute to borrowers' financial distress and mental health problems, affecting worker behavior on the job. The new policy could also help attract and retain workers given the tight labor market and the relative dearth of younger employees. Our research will also be invaluable for professional financial planners helping to guide clients as they make debt repayment, saving, and retirement plan decisions.

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This executive summary discusses analysis and findings of the working paper by Vanya Horneff, Raimond Maurer, and Olivia S. Mitchell (2023) entitled "Employer 401(k) matches for student debt repayment: Killing two birds with one stone?" The authors are grateful for comments from Richard Shea. We also acknowledge research support from the TIAA Institute and funding provided by the German Investment and Asset Management Association (BVI) and the Pension Research Council/Boettner Center at the Wharton School of the University of Pennsylvania. Opinions and any errors are solely those of the authors and not those of any individuals cited or any institutions with which the authors are affiliated. ©2024 Horneff, Maurer, and Mitchell.

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