Congressional Budget Office
Nonpartisan Analysis for the U.S. Congress

Student Loan Repayment, 2009 to 2019

SEPTEMBER | 2024

At a Glance

Recent changes to the federal student loan program will affect student loan borrowing, repayment, and debt. Payments on student loans, which were suspended during the coronavirus pandemic, restarted in October 2023. A new repayment plan introduced in August 2023 will significantly reduce interest accrual and payments for certain borrowers. And lawmakers have expressed interest in changing federal measures of student loan repayment that are used to hold institutions accountable for the quality of education they provide.

Understanding patterns of student loan repayment before payments were suspended during the pandemic can shed light on how those recent and proposed changes to the federal student loan program might affect students, educational institutions, and the federal budget. To that end, the Congressional Budget Office identified a representative sample of federal student loans whose repayment periods began between July 2009 and June 2013 and examined several measures of their progress through 2019.

- **Loan Repayment.** In the first six years after repayment began, the balances of nearly a quarter of loans fell by 50 percent or more, and a modest share of loans were paid off entirely. However, balances increased—sometimes substantially—for 57 percent of loans. On average, loans spent 45 percent of months in repayment status (during which payments were expected—including zero-dollar payments for borrowers in certain repayment plans), and borrowers made payments greater than $10 in only 38 percent of the months in which a payment was due.
- **Loan Default.** The share of loans in default during any given month rose from 4 percent one year into the repayment period to 12 percent after three years and 16 percent after six years.
- **Differences Among Repayment Plans.** Loans in repayment plans whose monthly payments depended on borrowers' income were repaid more slowly but were also less likely to default.
- **Differences Among Borrowers.** Students who received Pell grants repaid their loans more slowly than students who did not, and those differences increased with time. Students who ultimately attained less schooling showed slower repayment than those who attained more schooling.
- **Differences Among Institutions and Academic Programs.** Repayment outcomes differed substantially among institutions, even for study in a common field. Students who attended for-profit institutions, two-year public institutions, and institutions with lower degree-completion rates repaid their loans more slowly. Positive repayment outcomes were more likely in academic programs leading to advanced degrees.
- **Short-Run Versus Long-Run Outcomes.** Repayment outcomes after three years were highly indicative of outcomes after six years. But the degree to which loans had been paid down was more predictive of later repayment outcomes than whether or not the loans went into default.

Contents

Notes About This Report

This analysis focuses on loans taken out under the Federal Family Education Loan Program and the William D. Ford Federal Direct Loan Program by undergraduate and graduate students whose repayment periods began between July 2009 and June 2013. (Parent PLUS loans were excluded from the sample.) The last month of data used in the analysis is June 2019; thus, the loans' repayment periods preceded the suspension of loan repayment during the coronavirus pandemic.

Numbers in the text, figures, and table may not add up to totals because of rounding. The Congressional Budget Office did not adjust loan balances for inflation to construct measures of repayment.

For an overview of federal student loans, including details referenced throughout the report, see Appendix A. For a discussion of the data sources and methods used to conduct the analysis and construct the figures, see Appendix B.

Most of the estimates in this report describe repayment outcomes for an average loan in the first six years after entering the repayment period. The report also presents estimates describing repayment in an average month and on a per-dollar-borrowed basis. For a discussion of those alternative statistical measures, see Appendix C.

This analysis is based primarily on an extract of data from the Department of Education's National Student Loan Data System (NSLDS). After CBO completed the analysis, the Department of Education released an updated extract of data from the NSLDS. The updated extract includes a different sample of loans and incorporates corrections to errors in the NSLDS data that the department identified in an audit of its fiscal year 2023 financial statement. Specifically, for some loans, repayment status had been reported incorrectly for some time. CBO compared similar groups of loans from the two extracts and concluded that the differences would be unlikely to significantly change the results in this report. Therefore, to provide timely information to the Congress, CBO did not update the analysis to reflect the new data. For a comparison of the two samples, see Appendix D.

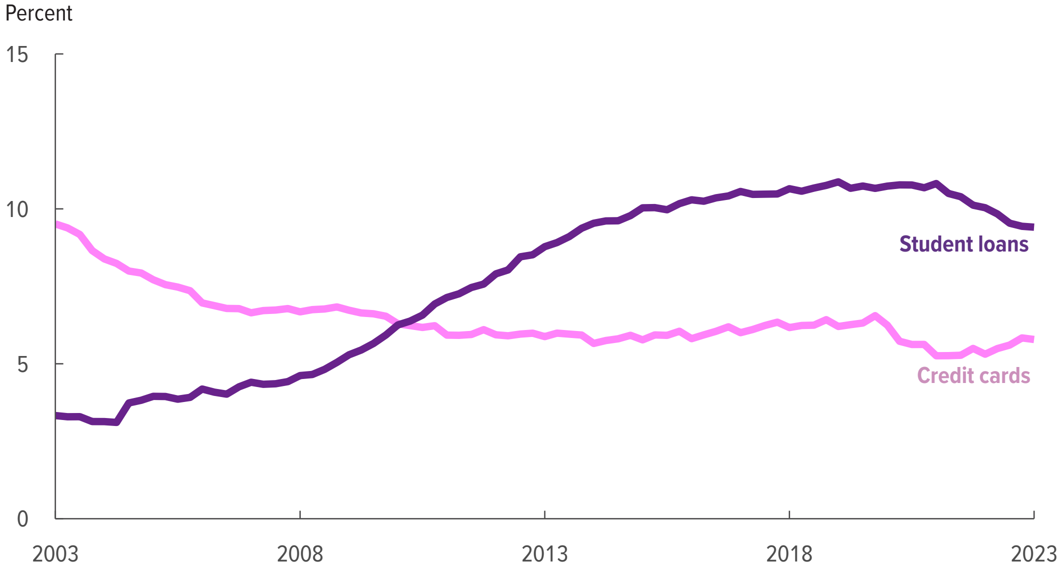
Chapter 1: Introduction

Student loans are an important source of funding for postsecondary education; they are also an increasingly significant source of individual debt. And paying off that debt is a challenge for some borrowers: Before the coronavirus pandemic, the fraction of payments that were past due was larger for student loans than for credit card accounts.

Institutions lose access to the federal student loan program if they cannot meet certain accountability standards—in particular, the **cohort default rate** (CDR), which is based on student borrowers' rate of default in their first three years of repayment. But some policymakers have suggested that sanctions based on short-run default rates may not reduce borrowers' ultimate risk of default. During the pandemic, moreover, the suspension of payments and interest accrual on most loans prevented many loans from entering default. For those reasons, alternative measures of accountability have recently been proposed. (For more details, see Appendix A.)

Against that background, the following chapters use several measures of student loan repayment to describe borrowers' outcomes from 2009 to 2019.

Student Loan and Credit Card Debt as a Percentage of Individual Debt, 2003 to 2023

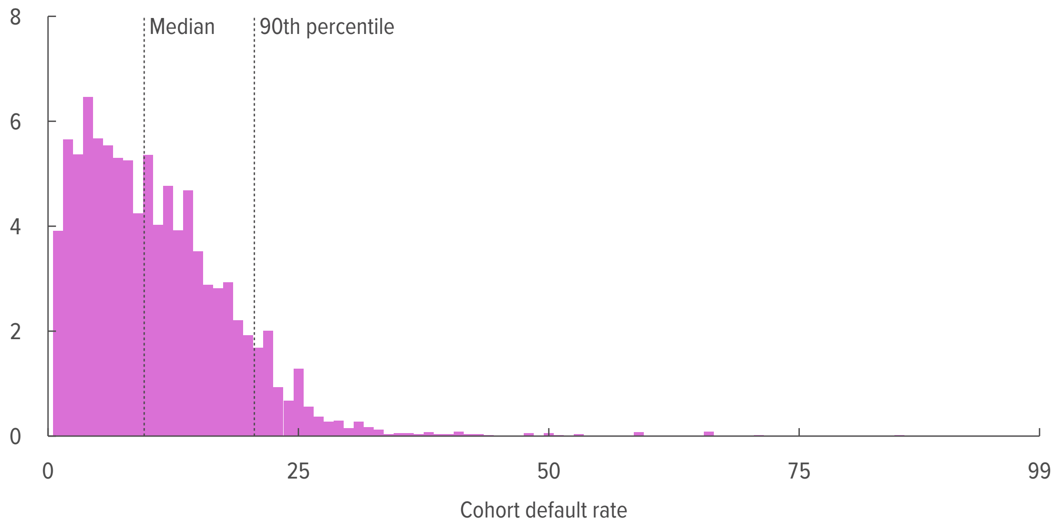


Student loans and credit card accounts are significant sources of debt that is not backed by collateral. Since 2010, student loans have accounted for most of that type of debt.

In the first quarter of 2023, student loan debt made up 9.4 percent of all individual debt.

Distribution of Institutions' Cohort Default Rates, 2019

Percent



Before the pandemic, default was common at some institutions. Although most schools had a CDR below 10 percent, about one-tenth had a rate above 20 percent.

Institutions whose CDR equals or exceeds 30 percent for three consecutive years may lose their eligibility to participate in the William D. Ford Federal Direct Loan and Federal Pell Grant Programs.

Chapter 2: What Trends Emerged in the First Six Years of Repayment?

This chapter examines four measures of repayment over the first six years after borrowers were expected to begin repaying their student loans (referred to as the **repayment period** in this report):

- The share of debt remaining,
- The loan's status (that is, whether the loan was paid in full, discharged, deferred, in forbearance, in default, or in repayment),
- The share of expected payments fulfilled with a payment greater than $10, and
- The rate of default.

A loan's share of debt remaining and default status are measured at a particular point in time—for instance, at the end of the sixth year of the repayment period. However, those outcomes reflect the loan's history of payments and statuses. The other two measures are therefore intended to summarize those payments and statuses over the entire six-year period. All of the measures are calculated for each loan in the Congressional Budget Office's sample and then presented as distributions or averages for all loans in the sample or for a subset of those loans. (For more details on how the four measures were constructed, see Appendix B.)

CBO also calculated alternative measures to examine how specific characteristics of loans, such as the number of months they spent in repayment status or their dollar amount, influenced repayment outcomes. In particular, CBO calculated alternative estimates of the frequency of payments for the average month in repayment status among all loans. Borrowers who spent more months in repayment status also tended to make more of their payments; as a result, payments appear more frequent when estimated for an average month in repayment status than when estimated over the life of the average loan. For a more detailed description of those and other alternative estimates, see Appendix C.

Share of Debt Remaining

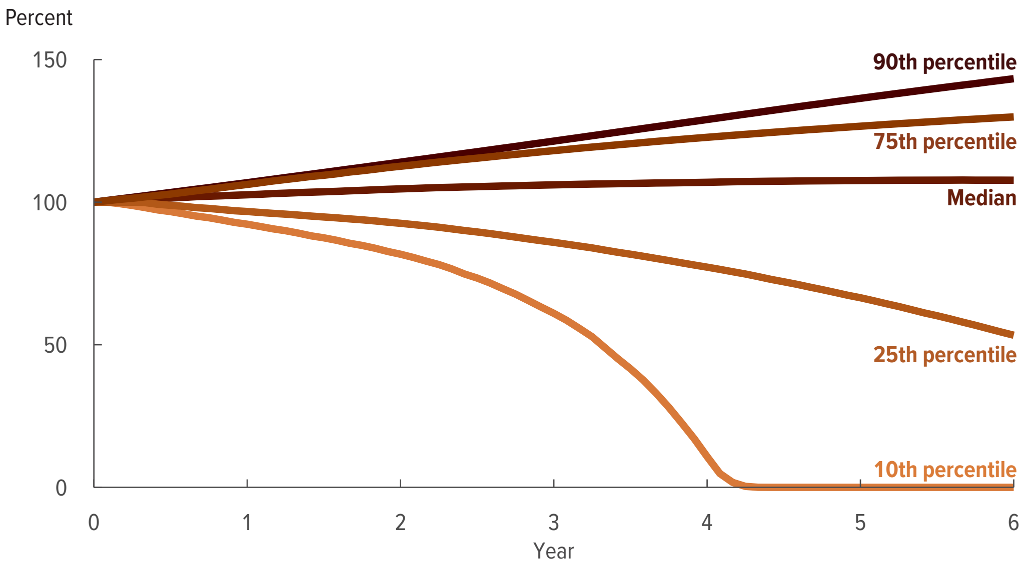
The **share of debt remaining** is a loan's outstanding balance as a percentage of the balance when the borrower first entered the repayment period—usually six months after the borrower ceased to be at least a half-time student.

Most loans accrued interest while borrowers were still in school, so a loan's outstanding balance at the start of the repayment period was usually greater than the amount originally borrowed. (That interest accrual was suspended during the pandemic.) Unless the loan was discharged or forgiven, its share of debt remaining continued to grow if interest accrued faster than payments reduced balances. (Some repayment plans offered loan forgiveness, but not within the window of payments analyzed here.)

Accordingly, the share of debt remaining shrank for some of the loans in CBO's sample but grew for many more as interest accrued. Three years into the repayment period, the median share of debt remaining was 106 percent. In other words, balances increased by more than 6 percent for half of the loans. For loans at the 25th percentile—those with a smaller share of debt remaining than three-quarters of the loans—the share of debt remaining was 86 percent. For loans at the 75th percentile, the share of debt remaining was 118 percent.

Over the next three years, the median share of debt remaining continued to grow, rising to 108 percent. Differences across the distribution also continued to expand: By year 6, the share of debt remaining had fallen to 53 percent at the 25th percentile but had risen to 130 percent at the 75th percentile.

Shares of Debt Remaining Among Loans Over the First Six Years of the Repayment Period



After six years, more than half of the loans had larger outstanding balances than they did when the repayment period began.

The share of debt remaining varied widely among loans with declining balances, reflecting differences in borrowers' payments. Rising balances, which varied less, generally reflected the accrual of interest.

Loan Status

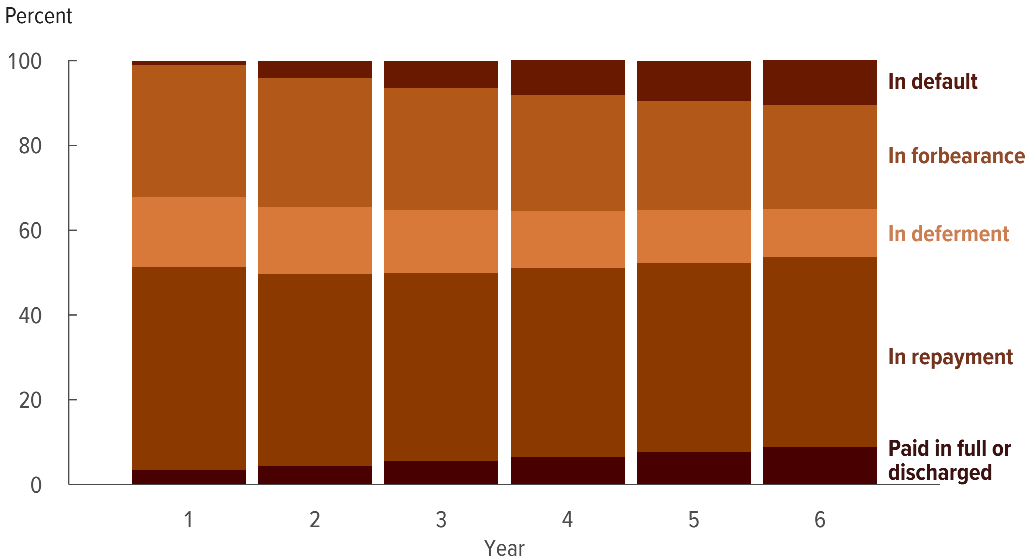
Over the six years after the start of the repayment period, some loans were **paid in full**. Others were **discharged**, meaning that their balances were forgiven—for example, because the borrower died or the borrower's school had closed.

While loans were outstanding, certain borrowers—including those who had reenrolled in school, were serving in the military, or were experiencing persistent economic hardship—could suspend their loan payments and, in some cases, their interest accrual by requesting a **deferment**. If borrowers were not eligible for deferment but were experiencing temporary hardship (due to a job loss, for instance), they could request **forbearance** to postpone or reduce their monthly payments. The average proportion of months spent in deferment or forbearance was large at first but then declined; that proportion was 36 percent over the first six years of the repayment period. Loans that were not paid in full or discharged after six years spent 41 percent of months in deferment or forbearance, on average.

Loans went into **default** if borrowers failed to make scheduled payments for at least 270 days. With each year of the repayment period, the percentage of months in which loans were in default rose because most loans that enter default remain in that status. On average, loans spent 11 percent of months over the whole six-year period in default.

Loans that fell into none of those categories were in **repayment status**. Over the full six-year period, loans spent an average of 45 percent of months in repayment status.

Cumulative Fraction of Time Spent in Each Loan Status, by Year of the Repayment Period



On average, loans spent about half of the first year of the repayment period in deferment or forbearance.

As time went on, loans spent a greater share of months in default. Because fewer loans were in deferment or forbearance, the overall fraction of months that loans spent in repayment status remained relatively stable.

Payments

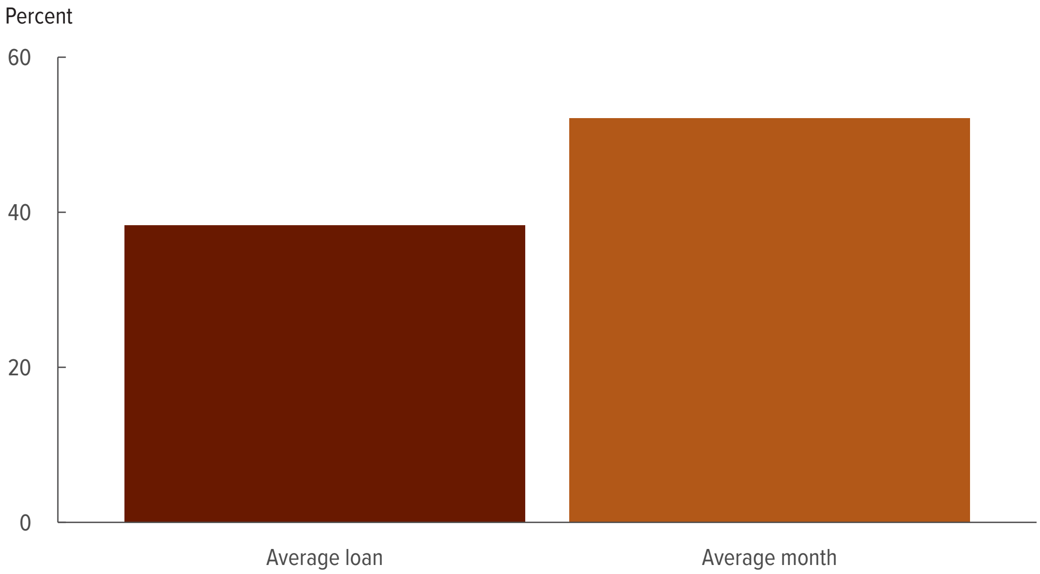
Even when a loan is in repayment status, borrowers sometimes skip expected payments or do not make payments that will significantly reduce their balance. Direct information about borrowers' payments was not available for all loans in the sample, so CBO estimated those payments from changes in the loans' balances. If a loan's balance in any given month was more than $10 less than it would have been without a payment, CBO inferred that a substantive payment had been made. Thus, only **substantive payments**—that is, payments greater than $10—were counted in CBO's analysis. (For details on that calculation, see Appendix B.)

Certain repayment plans may require borrowers to make monthly payments of $10 or less. Thus, a lack of substantive payments need not indicate failure to abide by the terms of a loan. (Many loans in those plans were eligible for some amount of forgiveness, but not within six years after entering the repayment period.)

On average, over the entire six-year period, borrowers made substantive payments in 38 percent of the months in which a payment was expected. Among loans that spent at least 36 months in repayment status, only 4 percent had no substantive payments. More than half of those loans were in income-driven repayment plans, which are discussed below (see Chapter 3).

Some borrowers make payments when their loans are not in repayment status. About one in seven substantive payments were made when loans were in default, forbearance, or (most often) deferment.

Percentage of Payments Greater Than $10 While in Repayment Status



A substantive payment was made in 38 percent of the months an average loan was in repayment status.

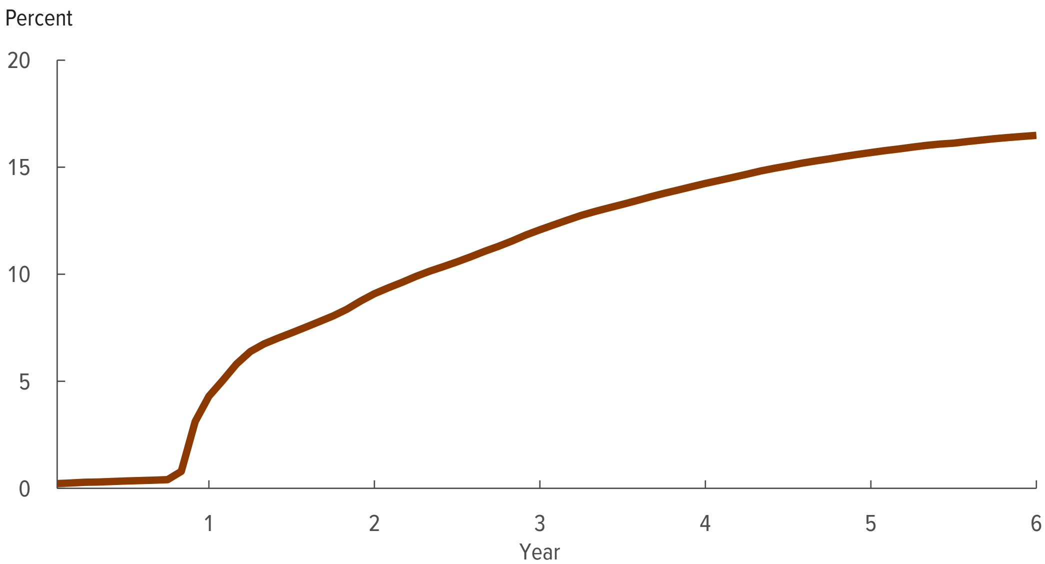
Loans that spent more time in repayment status tended to receive substantive payments a greater fraction of the time. As a result, during an average month in repayment status, there was a 52 percent chance of a payment's being made.

Loan Default

A growing fraction of loans went unpaid for extended periods and eventually entered default. By law, student loans cannot go into default within the first nine months of the repayment period. (For details, see Appendix A.) After that grace period, however, the share of loans in default during any given month rose—from 4 percent one year into the repayment period to 12 percent after three years and 16 percent after six years.

Default is, in principle, a temporary status. A loan can exit default status if the borrower makes nine monthly payments on time, consolidates the loan, or repays it in full. Most money owed on defaulted student loans is eventually recovered by the government, either through borrowers' resumption of payments or through involuntary collection methods such as wage garnishment. Student loan debt is rarely discharged in bankruptcy.

Rate of Default Over the First Six Years of the Repayment Period



Loans cannot go into default in the first nine months of the repayment period—but many borrowers failed to make payments thereafter and quickly went into default. In the six months after that grace period, the default rate reached 6 percent.

Chapter 3: How Did Repayment Plans and Characteristics of Borrowers Influence Repayment Outcomes?

Borrowers' repayment progress reflects the terms and conditions of their repayment plans as well as a variety of other factors, including their family's financial circumstances and their ability to earn in the labor market.

A difference in repayment outcomes associated with one of those factors could reflect others as well, because many factors are related. For example, students' choice of repayment plan could be affected by their educational attainment, which in turn could affect their earning potential, and all of those factors could influence their repayment outcomes. Accordingly, variation in measures of repayment with respect to any one of those factors does not imply a causal relationship.

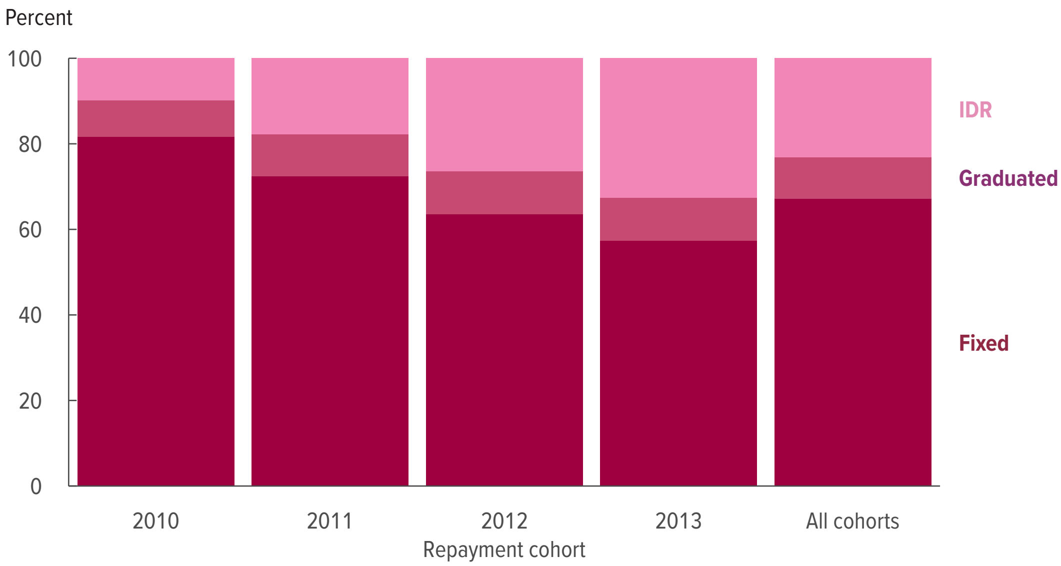
Borrowers’ Choice of Repayment Plans

Borrowers with student loans can enroll in three types of repayment plans: **fixed-payment plans**, which have fixed monthly payments; **graduated-payment plans**, which have monthly payments that rise over time; or **income-driven repayment (IDR) plans**, which have monthly payments based on the borrower’s annual income. Borrowers who do not opt for another repayment plan are automatically enrolled in a fixed-payment plan, but they can switch plans at any time. For this analysis, their choice of plan was measured five years into the repayment period. (See Appendix A for more details about repayment plans, their associated payments, and a recent change allowing for automatic enrollment in an IDR plan after 75 days of nonpayment.)

IDR plans require smaller payments when borrowers have low income, and they allow repayment over a longer period—typically 20 or 25 years instead of the usual 10—after which any remaining balance is forgiven. Required monthly payments in such plans may be as low as zero dollars. Zero-dollar payments, which require no action on the part of the borrower, still count toward the total number of payments required for forgiveness, and the amount of debt forgiven is likely to be greater for loans whose balances are reduced more slowly.

Those features make IDR plans relatively advantageous for students who borrow more or expect to have lower earnings after school. The share of loans in IDR plans has risen over time as eligibility for the plans has expanded and as plans with smaller expected payments and earlier loan forgiveness have been introduced and become more widely known.

Distribution of Loans, by Repayment Plan and Repayment Cohort



A minority of loans that entered their repayment period between July 2009 and June 2013 ended up in an IDR plan. That fraction increased significantly, from 10 percent to 33 percent, for successive cohorts of loans. (A repayment cohort comprises all loans that entered repayment in the 12 months prior to July of that year.)

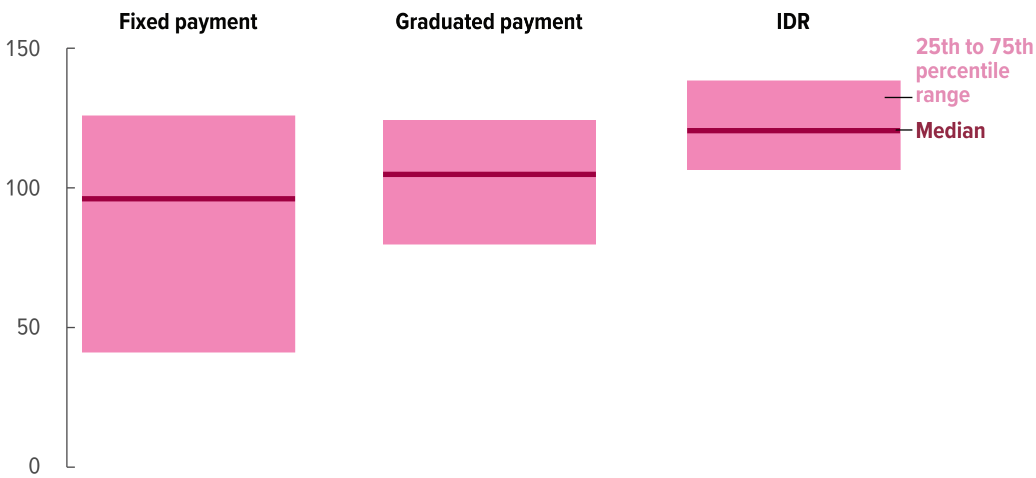
Loan Balances and Payments, by Repayment Plan

The median share of debt remaining declined more slowly for loans in IDR plans than for loans in other plans. At both three and six years after entering the repayment period, more than 75 percent of loans in IDR plans had rising balances. Loans in other repayment plans were more likely to have declining balances, especially in later years.

Smaller (as small as zero dollars) and less frequent payments might explain why so many borrowers enrolled in IDR plans failed to reduce their balances. Over the full six-year period, substantive payments were made in only 34 percent of the months an average loan with an IDR plan was in repayment status. For loans with graduated-payment plans (whose initial payment amounts were also relatively low) and fixed-payment plans, the corresponding rates were 49 percent and 38 percent, respectively. The lower frequency of payments in fixed-payment plans is consistent with their higher default rates: Most loans that enter default are in repayment status, but not receiving required payments, for the preceding nine months.

Shares of Debt Remaining at Year 6, by Repayment Plan

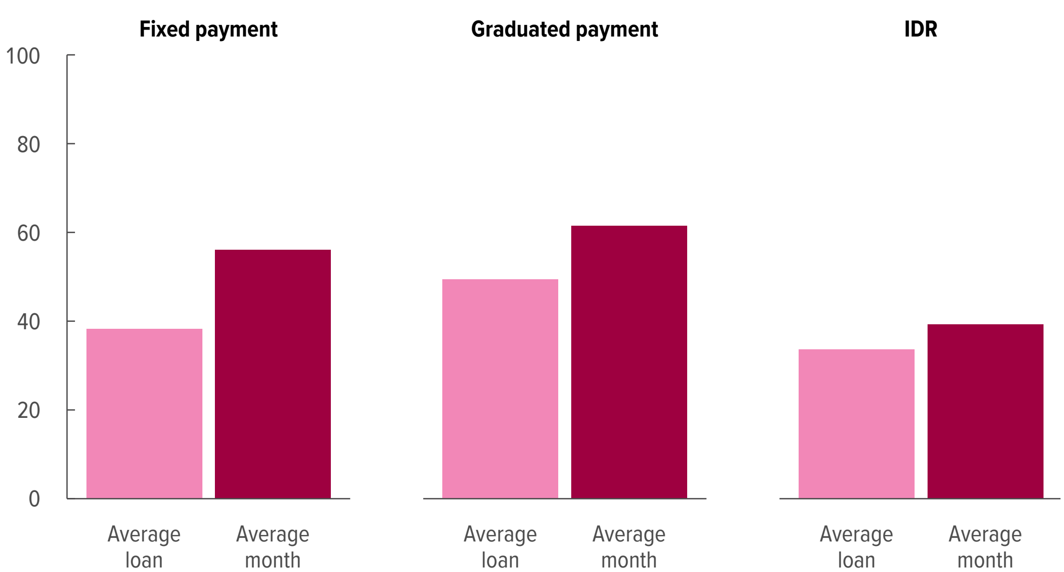
Percent



From the end of year 3 to the end of year 6, the median share of debt remaining fell from 103 percent to 96 percent among loans in fixed-payment plans but rose from 111 percent to 120 percent among loans in IDR plans. The share of debt remaining varied less among loans in IDR plans than among loans in other plans.

Percentage of Payments Greater Than $10 While in Repayment Status, by Repayment Plan

Percent



Borrowers with IDR plans made fewer substantive payments on their loans than borrowers with other payment plans.

The frequency of substantive payments is generally higher for the average month in repayment status than for the average loan because loans that spent more months in that status received payments more often. For loans in IDR plans, with monthly payments as low as zero dollars, that difference is smaller.

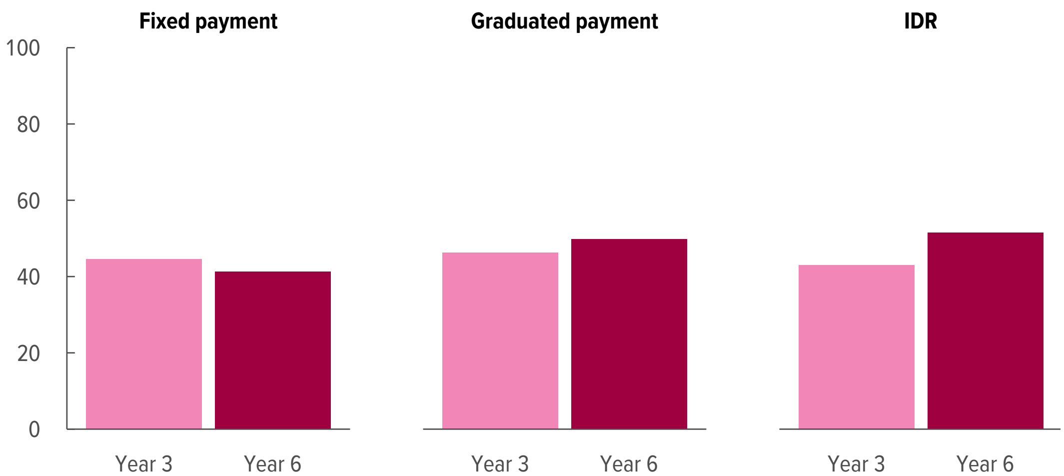
Loan Status, by Repayment Plan

Graduated-payment and IDR plans allow loans to stay in repayment status with relatively low payments, at least initially. Additionally, borrowers who acquire more schooling—and have larger loan balances, on average—are more likely to opt for IDR plans, and such borrowers might be more financially literate. Those factors might explain why the rate of default was much lower for loans in graduated-payment and IDR plans than for loans in fixed-payment plans.

Loans in IDR plans were less likely to be paid in full or discharged after six years of repayment—probably because borrowers with those plans had more student loan debt, on average, and more time to repay their loans. Loans in IDR plans were also more likely than loans in fixed-payment plans to go into forbearance. That trend might reflect the fact that when borrowers applied for IDR plans—or reapplied for the plans, which IDR plan participants must do annually—their loans were temporarily placed in forbearance while loan servicers confirmed their income level.

Percentage of Time in Repayment Status, by Repayment Plan

Percent

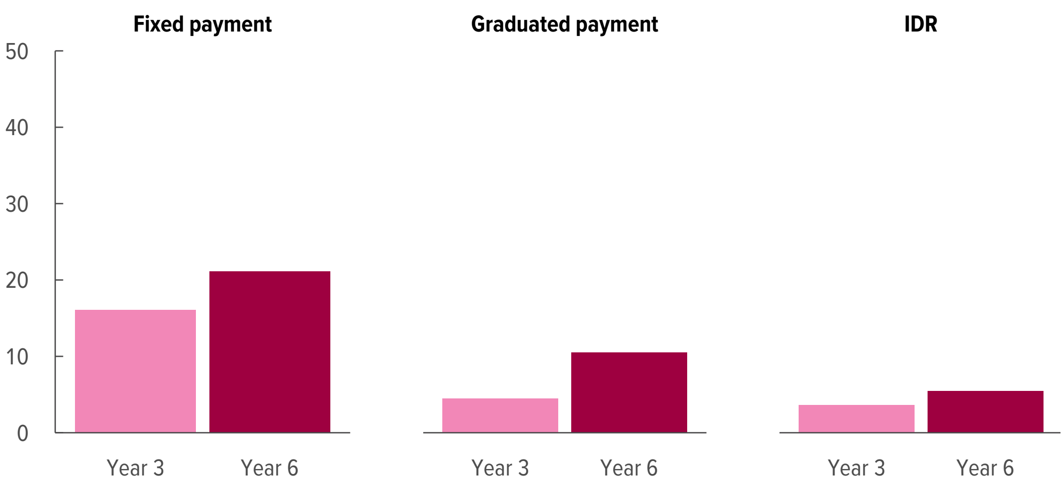


As the repayment period progressed, loans in fixed-payment plans spent less time in repayment status. The opposite was true for loans in IDR plans.

Overall, loans in IDR plans spent 52 percent of the six-year period (about 37 of 72 months) in repayment status, on average, as opposed to 41 percent (about 30 months) for loans in fixed-payment plans.

Rate of Default, by Repayment Plan

Percent



Default rates differed more between repayment plans than they did over time.

For loans in IDR plans, the default rate rose from 4 percent after three years of repayment to 6 percent after six years. For loans in fixed-payment plans, it rose from 16 percent to 21 percent.

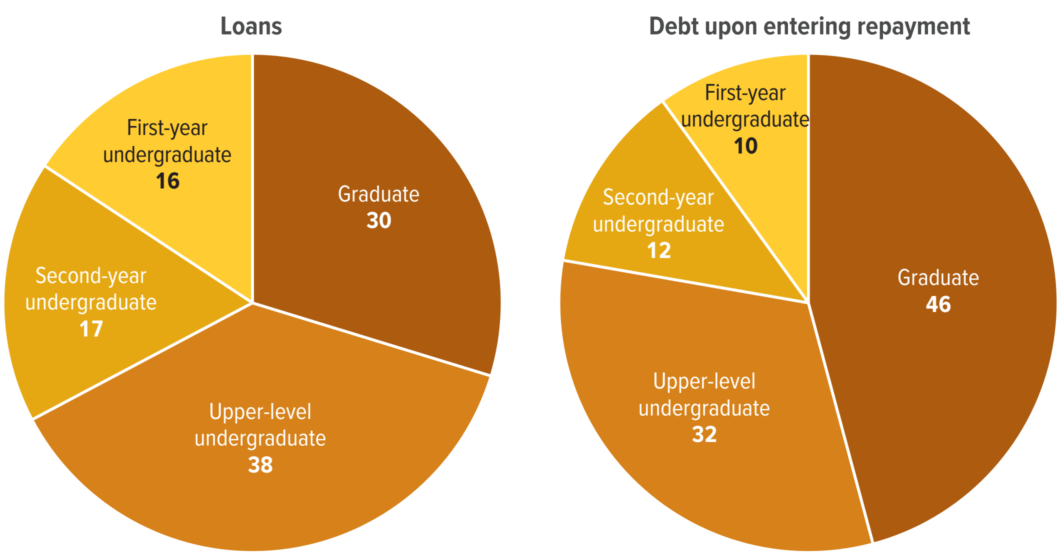
Levels of Schooling Financed With Student Loans

Students who borrow to finance more education tend to leave school with greater student loan debt, both because they attend for more years and because upper-level undergraduates and graduate students are eligible to borrow larger amounts. However, students who acquire more schooling (including schooling not financed by federal loans) ultimately tend to have greater earnings and, in turn, better repayment outcomes.

To assess how borrowers' ultimate level of schooling influenced their repayment outcomes, CBO identified all loans taken out by each borrower (including loans that entered repayment after the period under study) and sorted those loans into groups based on the highest level of schooling borrowers financed. For example, loans to borrowers who ultimately financed graduate school would include loans for attending undergraduate institutions as well. Categorizing loans in that way may better reflect borrowers' overall capacity to repay any one of their loans.

Distribution of Loans and Loan Debt, by Borrowers' Highest Level of Schooling Financed

Percent



Slightly less than one-third of loans were taken out by students who borrowed to finance just one or two years of schooling.

Thirty percent of loans were taken out by students who ultimately borrowed to attend graduate school. Because graduate students take out larger loans, that group accounted for almost half of the debt remaining at the start of the repayment period.

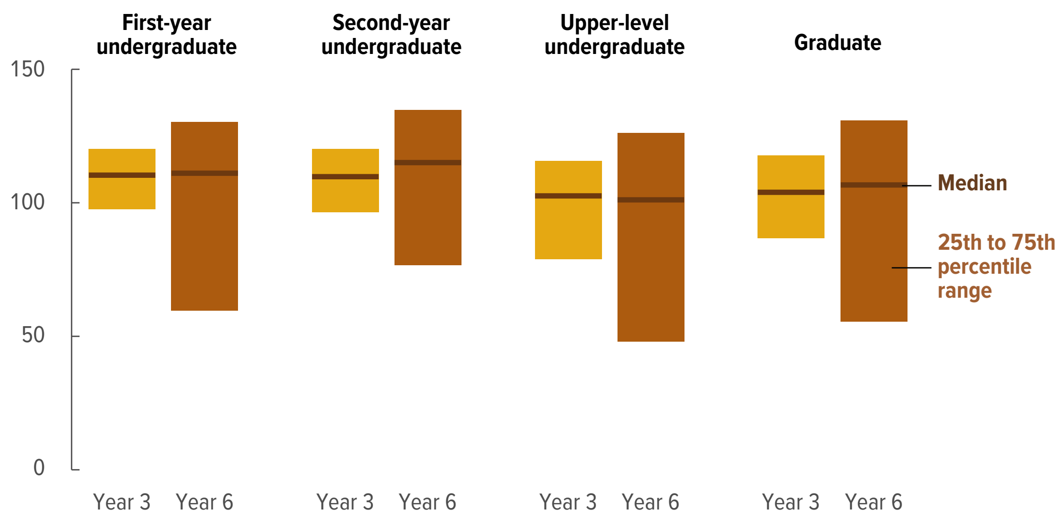
Loan Balances and Payments, by Borrowers' Highest Level of Schooling Financed

Borrowers who ultimately financed higher levels of schooling with federal student loans paid down their loans slightly faster. Those borrowers also made substantially more payments, on average, than did borrowers who financed fewer years of schooling. That result holds when calculated for the average loan and for the average month in repayment status. (The latter averages are higher because substantive payments were more frequent among borrowers who spent more months in repayment status.)

Those differences occurred even though borrowers with higher educational attainment were more likely to choose IDR plans—and therefore more likely to have low (even zero-dollar) expected monthly payments. Among loans to borrowers who financed no more than two years of undergraduate study, 16 percent were in an IDR plan five years after entering the repayment period; among loans to borrowers who ultimately financed graduate study, that share was 32 percent.

Shares of Debt Remaining, by Borrowers' Highest Level of Schooling Financed

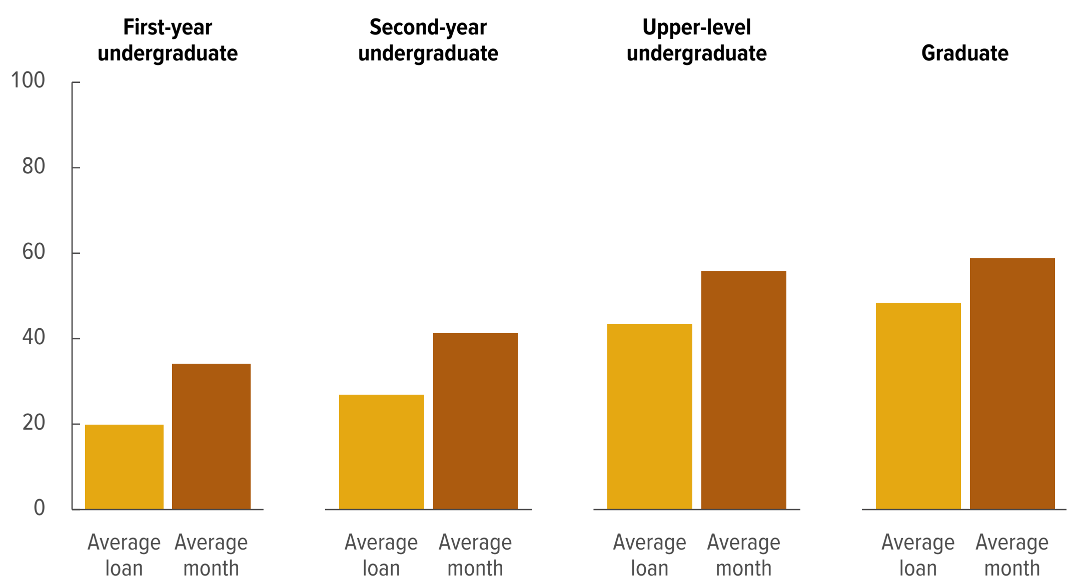
Percent



For all groups, the median share of debt remaining was higher after six years than it was at the start of the repayment period. At that point, borrowers who ultimately financed two years of undergraduate study had made the least progress in repaying their loans. Within that group, the share of debt remaining was still above 75 percent for more than three-quarters of loans.

Percentage of Payments Greater Than $10 While in Repayment Status, by Borrowers' Highest Level of Schooling Financed

Percent



Borrowers who financed higher levels of schooling with federal student loans were more likely to make payments while in repayment status.

In an average month in repayment status, borrowers who financed only one year of undergraduate study made a substantive payment 34 percent of the time. For those who borrowed to finance graduate school, that percentage rose to 59 percent.

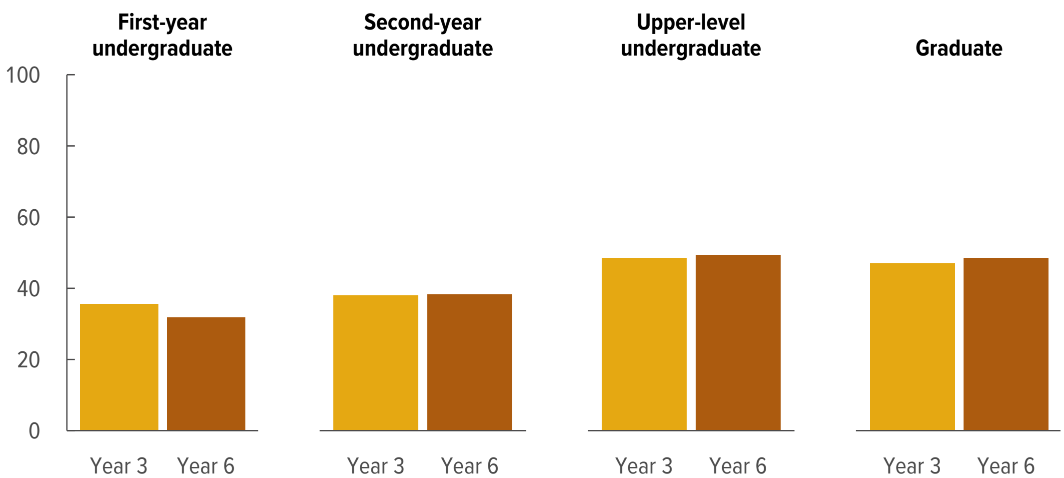
Loan Status, by Borrowers' Highest Level of Schooling Financed

Loans used to finance only one or two years of undergraduate study were less likely to be in repayment status than loans used to finance further schooling. In part, that difference reflects higher rates of forbearance among borrowers who attained less education. For borrowers who financed more than one year of schooling, the average percentage of time in repayment status was slightly higher over the full six-year period than it was over the first three years, suggesting a small improvement in borrowers' ability to repay loans.

The average rate of default increased over time for borrowers at all educational levels, but it was greatest, at both year 3 and year 6, for those who financed only one year of undergraduate study. Some of those borrowers may have left school without completing their program. If so, the schooling they financed may not have substantially increased their earning potential, making loan repayment more difficult.

Percentage of Time in Repayment Status, by Borrowers' Highest Level of Schooling Financed

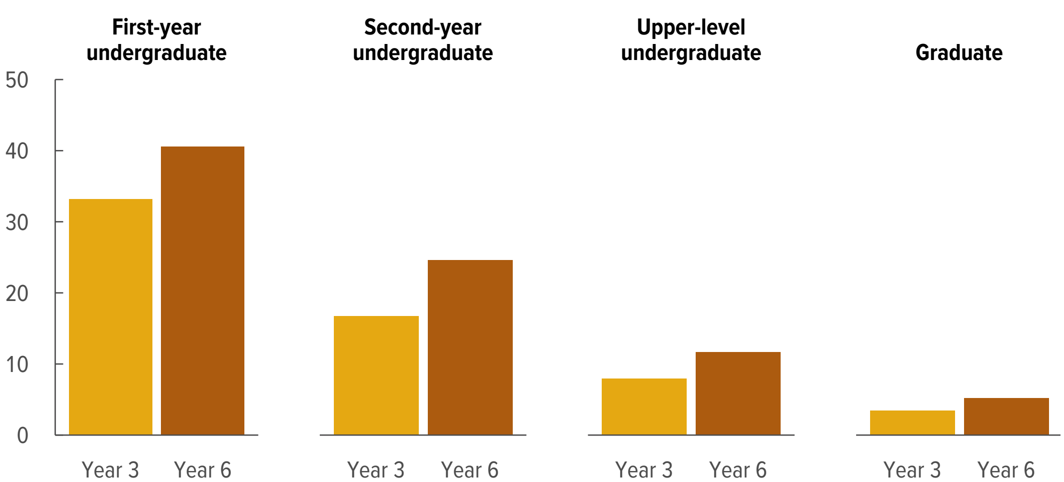
Percent



Over the first six years of the repayment period, loans to borrowers who financed no more than one year of undergraduate study were in repayment status only 32 percent of the time. Loans to those who went on to finance graduate school were in repayment status nearly half the time.

Rate of Default, by Borrowers' Highest Level of Schooling Financed

Percent



By year 6, 41 percent of loans to borrowers who financed only one year of undergraduate study were in default; among loans to those who financed upper-level undergraduate study, the default rate was 12 percent.

Borrowers' Financial Resources

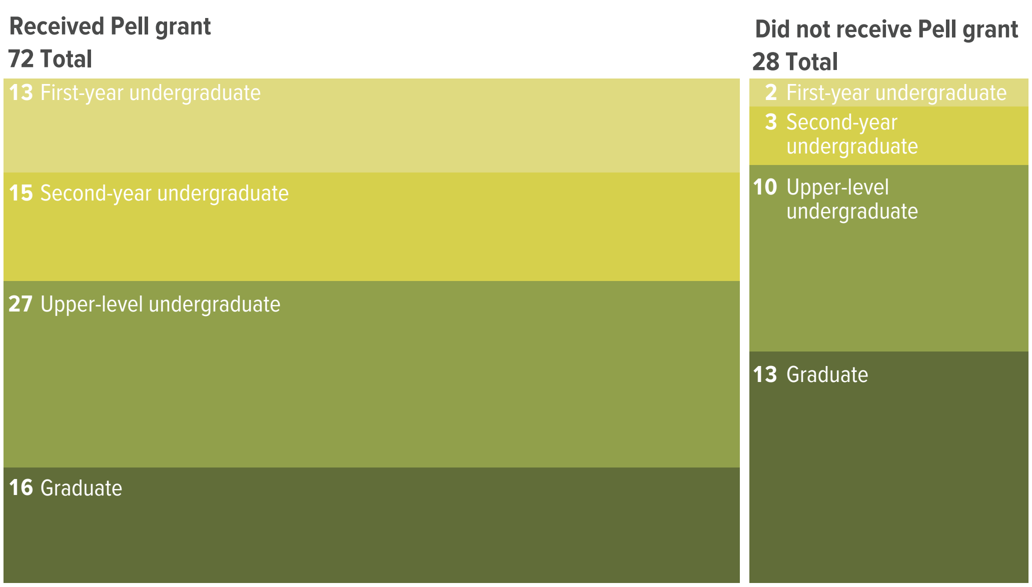
Students from families with greater financial resources are less reliant on grants or loans to support their education and tend to acquire more schooling. Higher earnings from greater educational attainment can, in turn, lead to better repayment outcomes. By contrast, borrowers from families with limited resources are more likely to finance their schooling through grants or loans and can face challenges in loan repayment.

One indicator of the financial resources available to a student's family is whether that student received a **Pell grant**. Pell grants are federal need-based grants for low-income undergraduate students. (They are not loans and do not need to be repaid.)

Seventy-two percent of the loans CBO analyzed were taken out by borrowers (including graduate students) who received a Pell grant for undergraduate study. On average, Pell grant recipients financed fewer years of schooling through loans and were less likely than nonrecipients to complete a vocational certificate or a degree. Those who received loans were more likely to take out both a subsidized and an unsubsidized loan to finance any level of schooling. (**Subsidized loans** do not accrue interest until payments are due and are available only to students who demonstrate financial need.)

Distribution of Loans, by Borrowers' Pell Grant Recipiency and Highest Level of Schooling Financed

Percent



Among the loans CBO analyzed, nearly 30 percent were made to Pell grant recipients who stopped borrowing after one or two years of college. In addition to having access to fewer family resources, such borrowers may not have obtained schooling sufficient to generate higher-paying job opportunities. (Graduate borrowers who received Pell grants were recipients as undergraduates.)

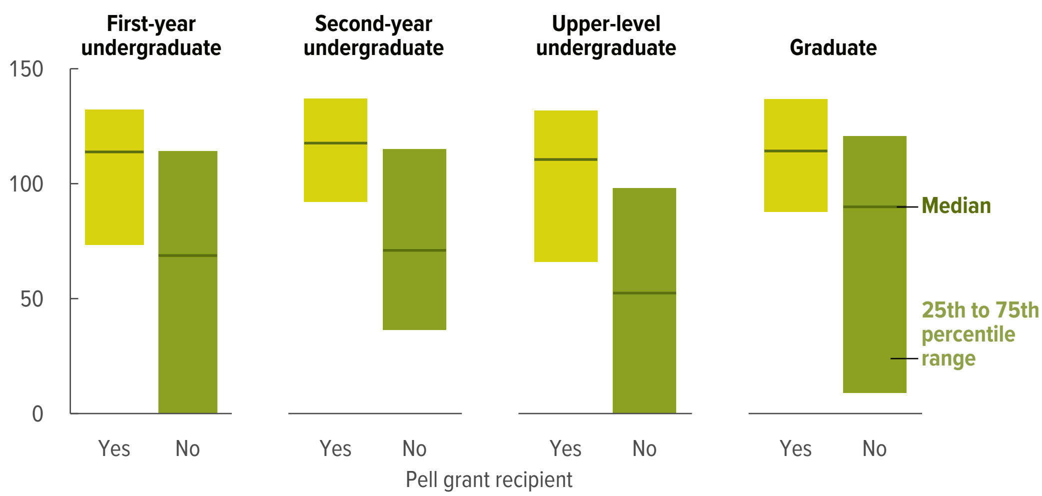
Loan Balances and Payments, by Borrowers' Pell Grant Recipiency and Highest Level of Schooling Financed

Six years after entering the repayment period, Pell grant recipients had made far less progress paying down their loans than nonrecipients had. Among nonrecipients, the median share of debt remaining ranged from 52 percent for those who financed advanced undergraduate study to 90 percent for those who financed graduate study, and more than a quarter of loans to those two groups were completely paid off by that time. By contrast, the median share of debt remaining among Pell recipients was above 100 percent for each schooling group.

Pell grant recipients were less likely than nonrecipients to make payments even when their loans were in repayment status. Over the full six-year period, payments greater than $10 were made on the average loan to a Pell recipient in only 31 percent of the months it was in repayment status. The rate for the average loan to a nonrecipient was 59 percent. That difference was smaller for loans to borrowers who financed graduate education.

Shares of Debt Remaining at Year 6, by Borrowers' Pell Grant Recipiency and Highest Level of Schooling Financed

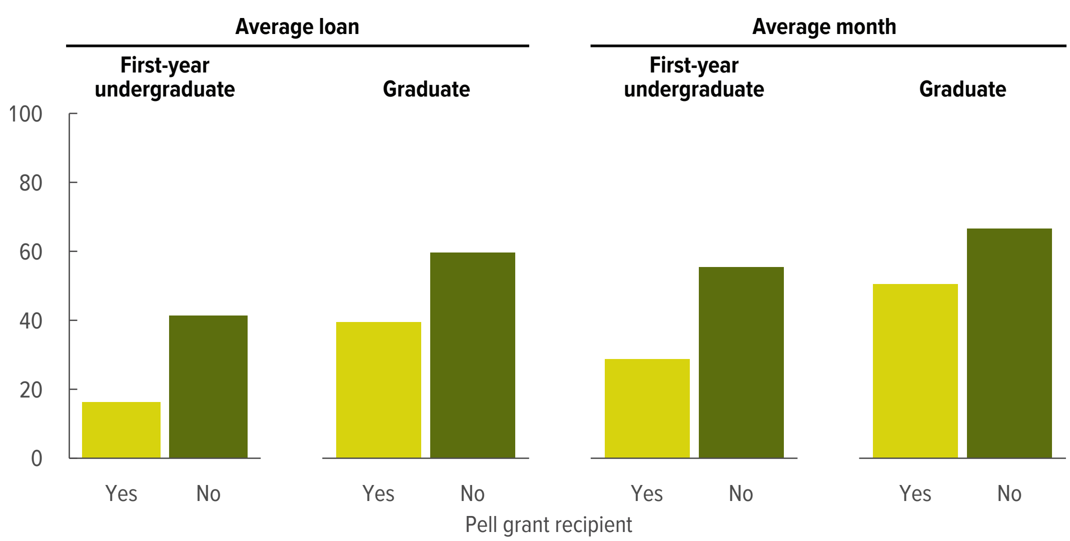
Percent



Among loans to Pell grant recipients, the median share of debt remaining six years after entering the repayment period was greater than 110 percent—irrespective of the level of schooling borrowers ultimately attained.

Percentage of Payments Greater Than $10 While in Repayment Status, by Borrowers' Pell Grant Recipiency and Highest Level of Schooling Financed

Percent



Pell grant recipients made substantive monthly payments less often than nonrecipients did—whether measured by averaging across loans or by averaging across months in repayment status. The difference between Pell recipients and nonrecipients was more pronounced among those who financed fewer years of schooling.

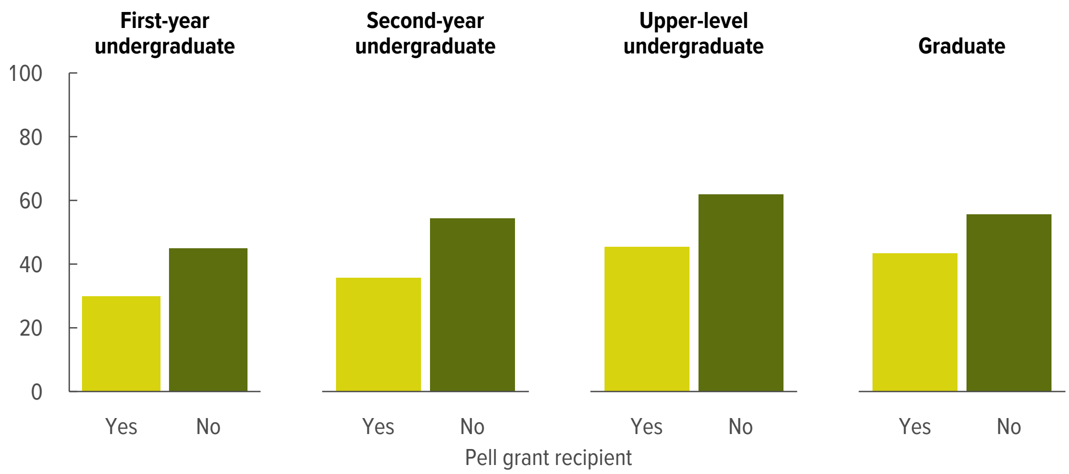
Loan Status, by Borrowers' Pell Grant Recipiency and Highest Level of Schooling Financed

Over the first six years of the repayment period, loans to Pell grant recipients were in repayment status 40 percent of the time, compared with 56 percent for loans to nonrecipients. That difference was starker when borrowers financed only undergraduate education.

By the end of the six-year period, 20 percent of loans to Pell recipients were in default, compared with 7 percent of loans to borrowers who never received a Pell grant. Again, the difference was starker when borrowers financed fewer years of schooling. Among borrowers who took out loans to attend graduate school, Pell grant recipients went into default at about twice the rate of nonrecipients, but their average default rate, of 7 percent, was still relatively low.

Percentage of Time in Repayment Status, by Borrowers' Pell Grant Recipiency and Highest Level of Schooling Financed

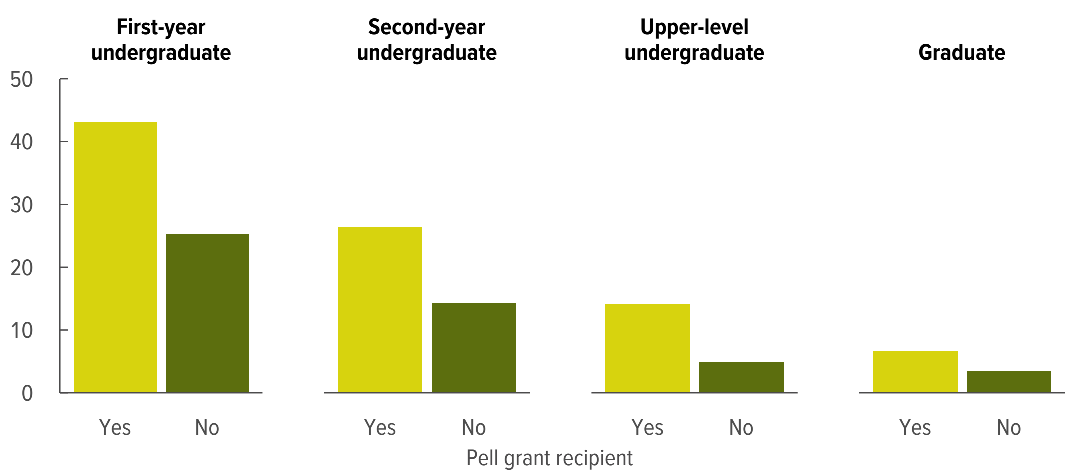
Percent



Loans were in repayment status 33 percent of the time for Pell recipients who financed just one or two years of undergraduate study and 50 percent of the time for nonrecipients who did so. Loans to upper-level undergraduates in both categories spent the most time in repayment status.

Rate of Default at Year 6, by Borrowers' Pell Grant Recipiency and Highest Level of Schooling Financed

Percent



Loans to borrowers who financed only one year of undergraduate study had a default rate of 43 percent when the borrowers were Pell grant recipients and a default rate of 25 percent when they were nonrecipients. Default rates were lower for loans to borrowers with higher levels of education.

Chapter 4: How Did Characteristics of Institutions Influence Repayment Outcomes?

Institutions whose students exhibit relatively slow loan repayment may not provide instruction sufficient to raise their students' potential earnings. In this chapter, the Congressional Budget Office describes how repayment outcomes varied among different types of institutions and among institutions whose students completed degrees at different rates.

CBO divided institutions into three major categories. **Nonprofit schools** are the most expensive but often offer substantial discounts on tuition in the form of financial aid to students with lower family income. **Public schools** generally have lower tuition than nonprofit schools because they receive funding from the states. Tuition at **for-profit schools** falls somewhere in between. Any of the three types of institutions may predominantly cater to students seeking a bachelor's or graduate degree; others cater to those seeking a certificate or an associate's degree. CBO refers to those institutions as **four-year** and **two-year** institutions, respectively. (For details on how schools were categorized, see Appendix B.)

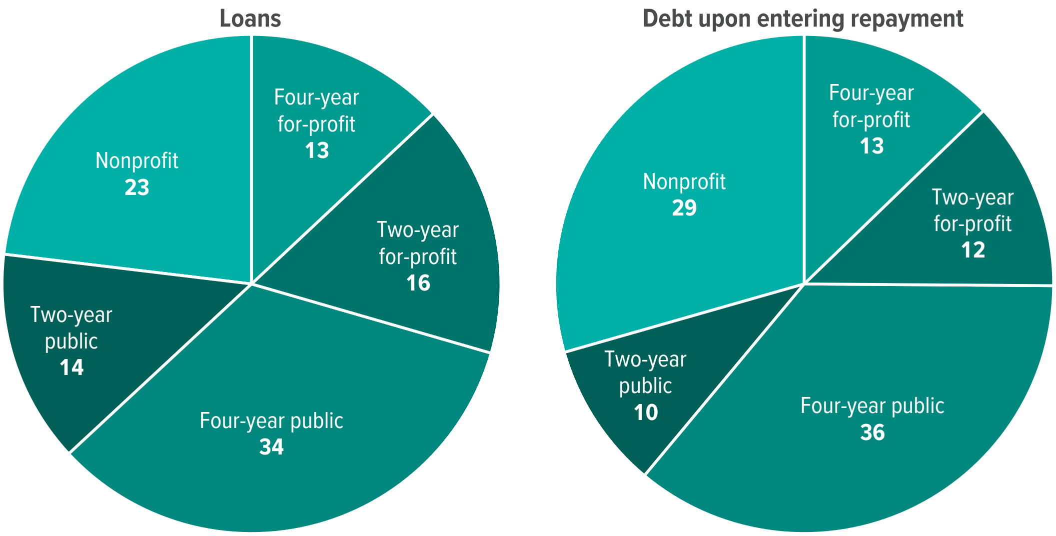
Institutions Where Borrowers Used Student Loans

Nonprofit, public, and for-profit schools offer different types of instruction at different prices, which affects the types of students who enroll and their borrowing needs. As a result, differences in repayment outcomes among the three types of schools might reflect the socioeconomic and educational background of students or their debt burdens, rather than differential quality of instruction.

Likewise, two-year and four-year schools may attract different groups of students and drive different patterns in borrowing. Loans used to attend two-year institutions, for example, represented 30 percent of loans but only 22 percent of debt upon entering the repayment period. That difference reflects smaller loan amounts for attending two-year institutions.

Distribution of Loans and Loan Debt, by Type of Institution

Percent



Most loans to attend public institutions were for four-year schools. By contrast, most loans to attend for-profit institutions were for two-year schools, even though four-year schools attracted more students.

On average, loans to attend nonprofit and four-year public schools had larger balances upon entering the repayment period than did other loans. Accordingly, those types of institutions represented a larger share of loan debt than of loans.

Loan Balances and Payments, by Type of Institution

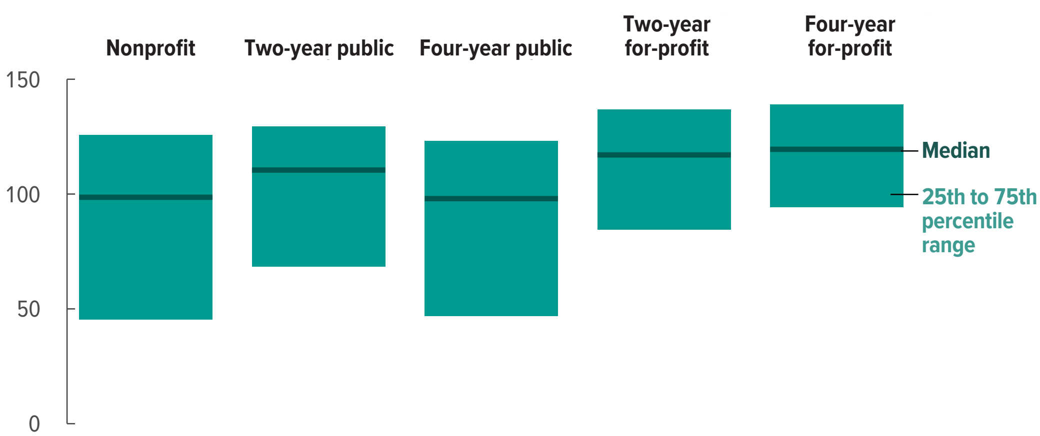
A substantial fraction of loans to attend four-year public and nonprofit schools showed declining balances over time: Six years into the repayment period, about half of those loans had smaller balances, and more than a quarter had seen their balance fall by 50 percent or more.

By comparison, loans to attend for-profit institutions had a larger median share of debt remaining, and fewer payments were made on those loans. After six years, 70 percent had larger balances than they did at the start of the repayment period.

For borrowers who financed study at two-year institutions, public schools had less of an advantage over for-profit schools. On average, at both year 3 and year 6, larger shares of debt remained, and fewer payments were made, on loans to attend two-year than four-year public schools.

Shares of Debt Remaining at Year 6, by Type of Institution

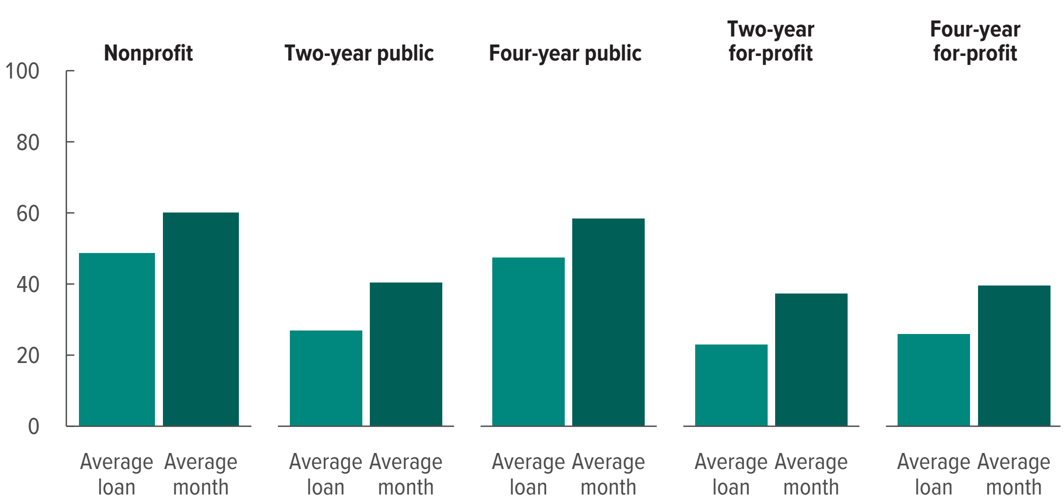
Percent



Two-year schools were linked to slower repayment; so were for-profit schools. After six years, the median share of debt remaining was 110 percent for loans to attend two-year public schools and 117 percent for loans to attend two-year for-profit schools.

Percentage of Payments Greater Than $10 While in Repayment Status, by Type of Institution

Percent



Borrowers who attended nonprofit or four-year public schools made substantive payments more frequently than did borrowers attending other types of institutions.

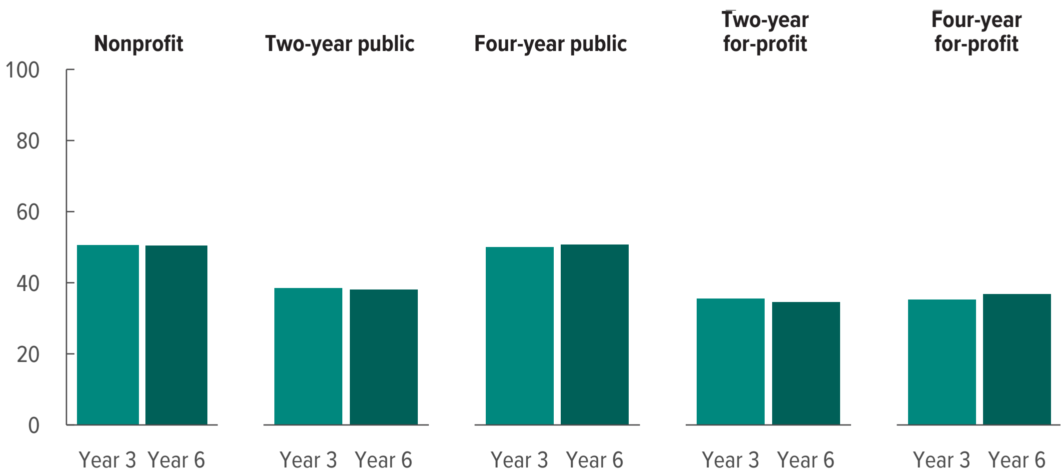
For the average loan to attend a nonprofit school, that payment frequency was about 50 percent. For the average month in repayment among such loans, the payment frequency was about 60 percent.

Loan Status, by Type of Institution

Loans to attend for-profit schools were in repayment status for less time, on average, than loans to attend public or nonprofit schools. They were also more likely, at any given point, to be in default. Three years into the repayment period, loans to attend four-year for-profit schools had a default rate of 15 percent, as opposed to 8 percent for loans to attend four-year public schools and 7 percent for loans to attend nonprofit schools. At that point, loans to attend two-year schools—both for-profit and public—had a 20 percent default rate. Differences in default rates between for-profit and public schools grew over time.

Percentage of Time in Repayment Status, by Type of Institution

Percent

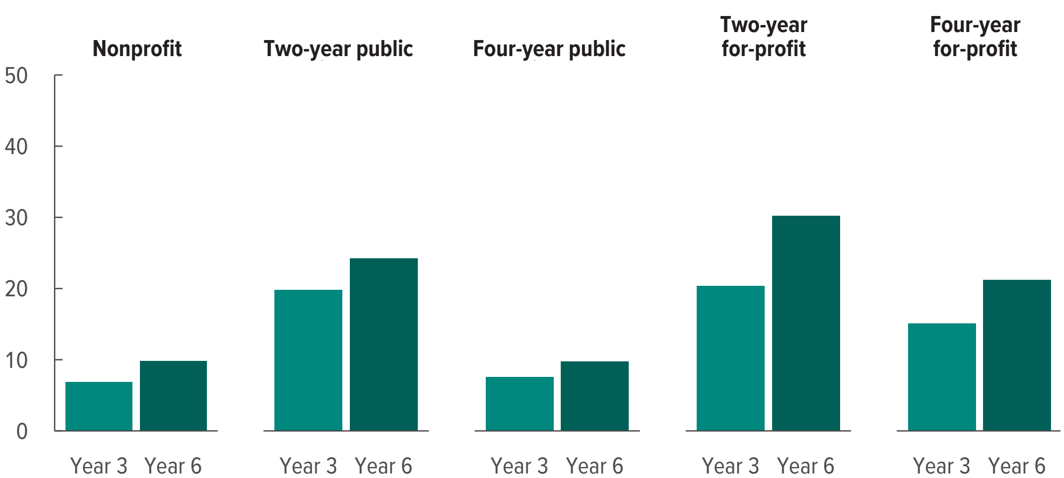


Loans to attend for-profit institutions were in repayment status about one-third of the time during the first six years of their repayment period.

Loans to attend four-year public and nonprofit schools were in repayment status about half the time over the same period.

Rate of Default, by Type of Institution

Percent



By year 6, the default rate on loans to attend four-year for-profit schools exceeded 21 percent, compared with 10 percent for four-year public and nonprofit schools.

Default rates were much higher for loans to attend two-year schools—30 percent for for-profit schools and 24 percent for public schools.

Differences in Repayment, by Institutions' Degree-Completion Rate

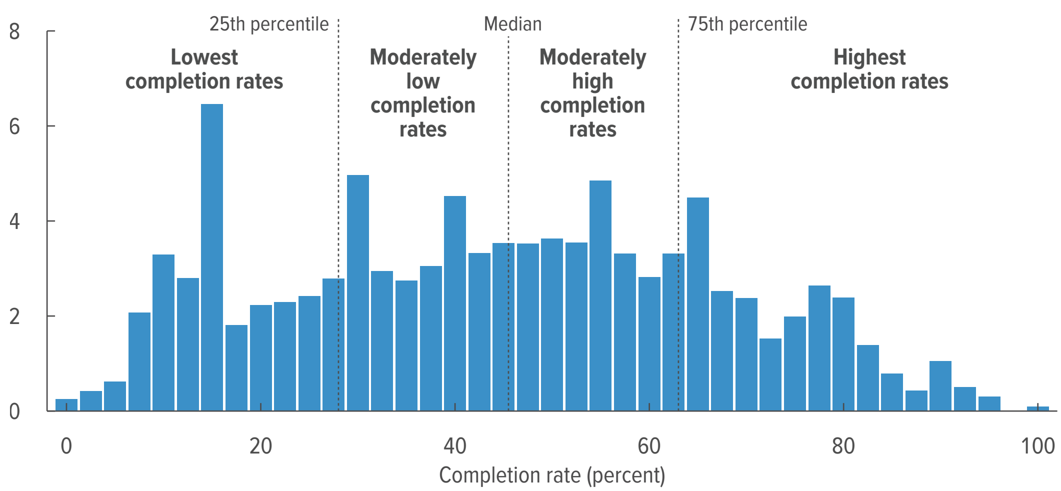
One possible reason repayment outcomes were worse for loans to attend two-year and for-profit institutions is that students at those institutions are less likely to complete their certificate or degree program. Loans to attend schools where more students obtained degrees had better repayment outcomes.

Using data from the College Scorecard, CBO divided institutions into quartiles, or fourths, based on their rates of degree completion. (For more details on the measure of degree completion, see Appendix B.) The median completion rate was 46 percent—in other words, more than half of the loans were for study at institutions where fewer than half of students completed their programs.

In the figures that follow, schools with the **lowest completion rates** are in the first quartile (the lowest 25 percentiles); those with **moderately low completion rates** are in the second quartile (the 26th through 50th percentiles); those with **moderately high completion rates** are in the third quartile (the 51st through 75th percentiles); and those with the **highest completion rates** are in the fourth quartile (the highest 25 percentiles).

Distribution of Student Loans, by Institutions' Degree-Completion Rate

Percent



A quarter of loans were used to attend schools where fewer than 28 percent of students completed their degrees or programs. Another quarter were used to attend schools with completion rates above 63 percent.

In the figure, the bunching of completion rates at some values reflects the effects of some institutions with many students and loans.

Loan Balances and Payments, by Institutions' Degree-Completion Rate

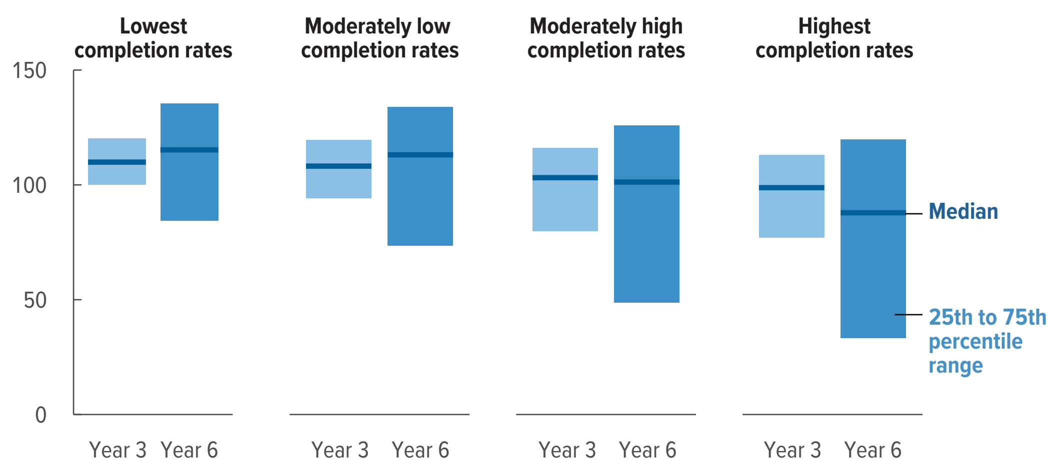
Repayment progress was slower, and default rates were higher, for attendees of schools where students were less likely to complete a degree. Those differences persisted over the six-year window.

For example, three years into the repayment period, the median share of debt remaining was 110 percent for loans to attend schools with the lowest completion rates and 99 percent for loans to attend schools with the highest completion rates. After six years, the median share had risen to 115 percent for the former group but fallen to 88 percent for the latter.

Students whose schools had lower completion rates were also less likely to make payments than those whose schools had higher completion rates.

Shares of Debt Remaining, by Institutions' Degree-Completion Rate

Percent

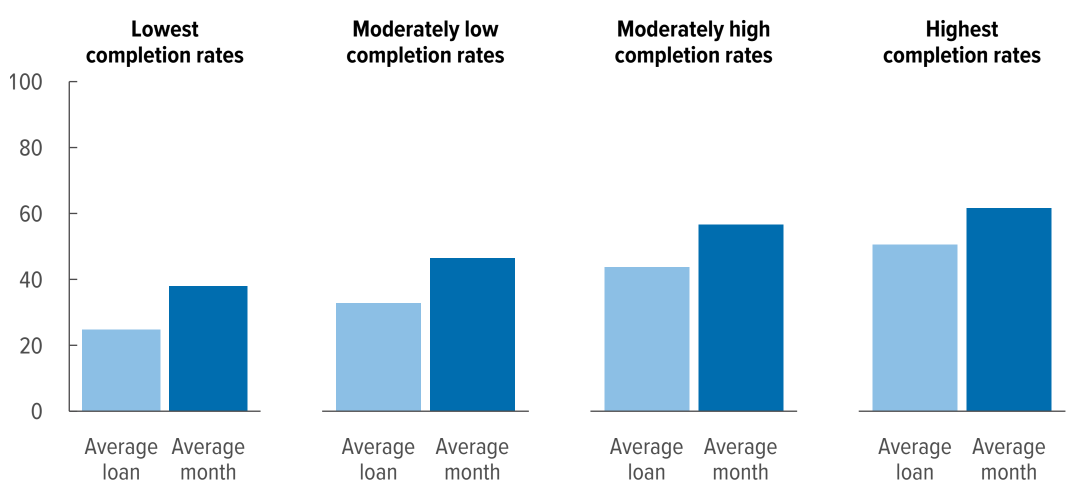


At year 6, the balances of a quarter of loans to attend schools with the highest completion rates had fallen by two-thirds or more.

For loans to attend schools with the lowest completion rates, remaining balances at the 25th percentile—that is, the balances of loans with relatively good outcomes—had declined by only about one-sixth.

Percentage of Payments Greater Than $10 While in Repayment Status, by Institutions' Degree-Completion Rate

Percent



The frequency of payments greater than $10 was substantially higher for loans to attend schools with higher completion rates.

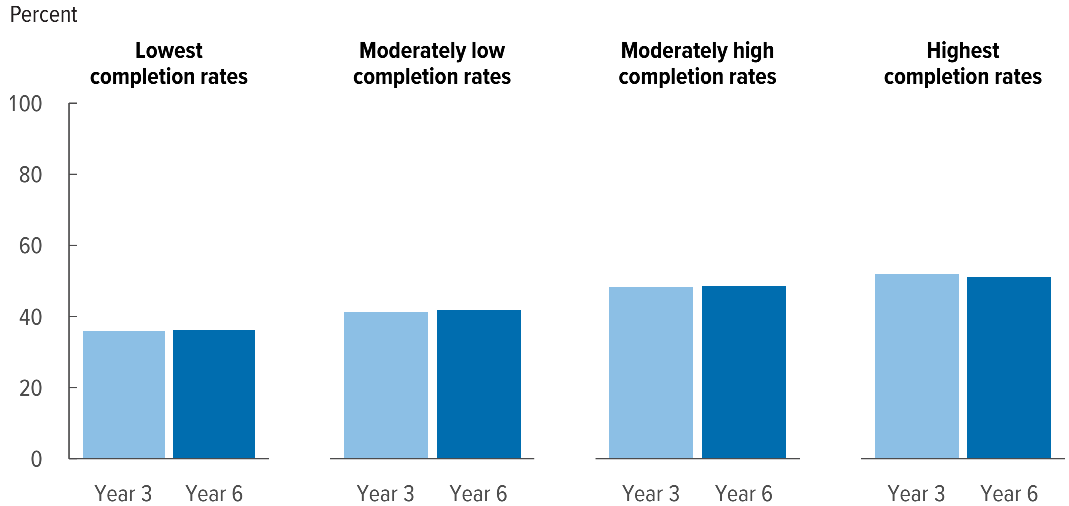
During the average month in repayment, the difference in the rates of such payments between loans to attend schools with the highest and lowest completion rates was 24 percentage points.

Loan Status, by Institutions' Degree-Completion Rate

Loans to attend schools where a larger percentage of students completed their degrees spent more time in repayment status, on average, at both year 3 and year 6. They were also less likely to be in default.

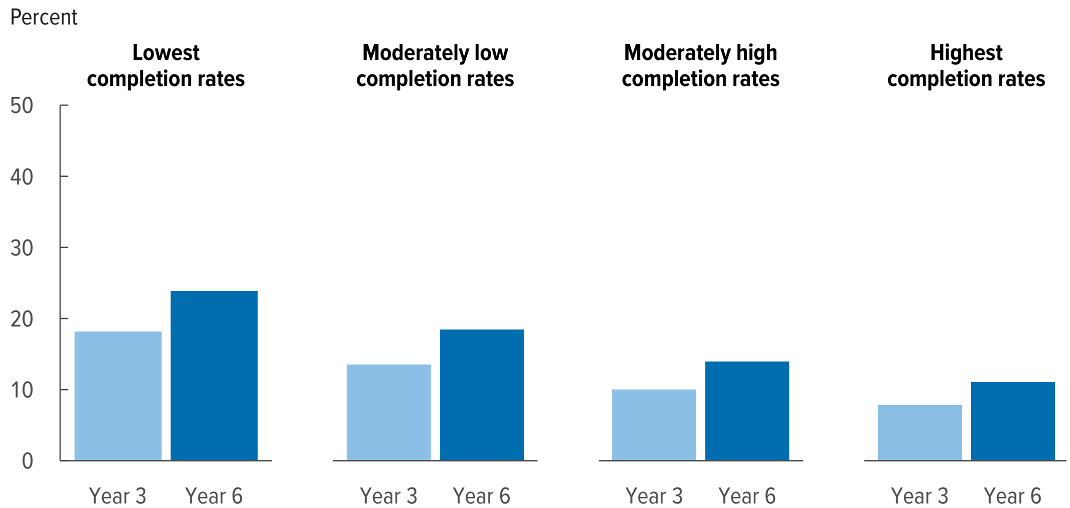
Default rates rose for all groups over time, but that increase was greatest for loans to attend schools where students were least likely to complete degree programs. At year 3, those loans had a default rate of 18 percent; by year 6, their default rate had risen to 24 percent.

Percentage of Time in Repayment Status, by Institutions' Degree-Completion Rate



Loans used to attend schools where more students completed their degrees generally spent more time in repayment status. Over six years, loans to attend schools with the highest completion rates were in repayment status 51 percent of the time, compared with 36 percent for loans to attend schools with the lowest completion rates.

Rate of Default, by Institutions' Degree-Completion Rate



Default rates at year 6 were 13 percentage points higher for loans to attend schools with the lowest completion rates than for loans to attend schools with the highest completion rates.

Chapter 5: Did Outcomes at Three Years Predict Longer-Term Outcomes?

The cohort default rate reflects default rates among borrowers at an institution approximately three years after they are supposed to begin repaying their loans. Institutions whose CDR equals or exceeds 40 percent in one year may lose access to federal student loans, and those whose CDR equals or exceeds 30 percent for three years may lose access to both federal student loans and Pell grants.

That three-year time frame is designed to quickly identify institutions where students face difficulties repaying loans. But if short-term repayment outcomes do not reliably predict eventual loan repayment, then accountability measures based on those outcomes may not be effective.

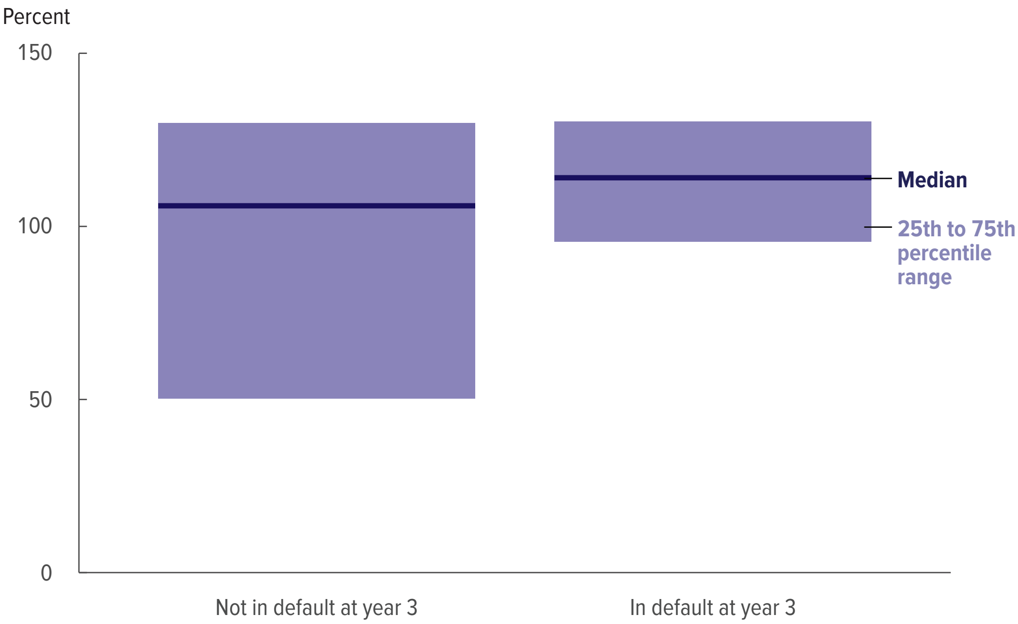
To gauge whether short-term repayment outcomes persist over time, the Congressional Budget Office calculated the share of debt remaining at year 6 for groups of loans with different repayment outcomes at year 3.

Early Default Status as a Predictor of Later Outcomes

Avoiding default early on did not guarantee faster repayment later. Six years into the repayment period, balances had risen by similar amounts for the loans with the slowest repayment rates regardless of their default status three years earlier. Among loans that were not in default after three years, 11 percent were in default after six years, and 61 percent had entered forbearance or deferment at some point by that time.

Nevertheless, loans that avoided default at year 3 were much more likely to be paid down: Six years into the repayment period, 45 percent of those loans had a declining balance, compared with 27 percent of loans that were in default at year 3.

Shares of Debt Remaining at Year 6, by Default Status at Year 3



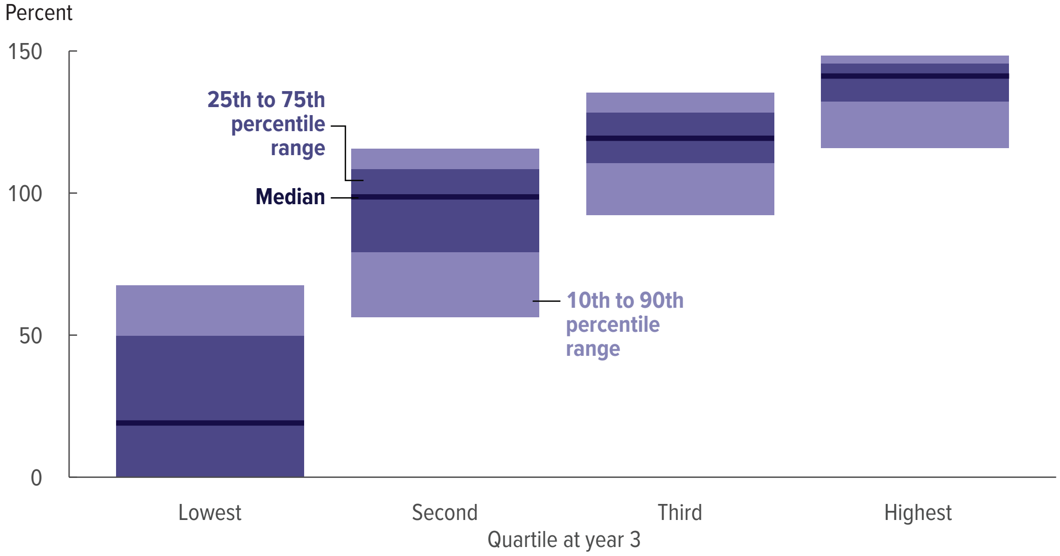
By year 6, balances had grown by 30 percent or more for a quarter of all loans, whether or not they were in default three years earlier.

However, loans that were not in default earlier were more likely to be paid down later. After six years, a quarter of those loans had been paid off by 50 percent or more. Among loans that were in default at year 3, by contrast, nearly three-quarters saw no reduction in their balance by year 6.

Early Share of Debt Remaining as a Predictor of Later Outcomes

A loan's repayment progress at year 6 was better predicted by its progress at year 3 than by its default status at year 3. Early changes in a loan's balance were also predictive of subsequent default. For loans with the largest shares of debt remaining at year 3 (that is, those in the highest quartile), the default rate at year 6 was 27 percent; for loans with the smallest shares of debt remaining at year 3 (those in the lowest quartile), the default rate at year 6 was only 3 percent.

Shares of Debt Remaining at Year 6, by Quartile of Debt Remaining at Year 3



Less than half of the loans with the smallest shares of debt remaining at year 3 were completely paid off or discharged by year 6. Balances increased for more than 90 percent of the loans with the largest shares of debt remaining at year 3.

Chapter 6: How Did Repayment Outcomes Vary Among Institutions and Programs?

Institutions and academic programs are likely to influence repayment outcomes even if the specific characteristics that influence those outcomes are difficult to identify. Therefore, whereas Chapter 4 reports outcomes for groups of loans used to finance study at different types of institutions, this chapter focuses on outcomes among institutions—regardless of their type—for particular groups of borrowers, such as those who completed their programs, pursued a bachelor's degree, or studied business.

The Department of Education publishes several measures of student loan repayment to give prospective students an idea of how much debt they might leave with after attending particular institutions or programs. Two of those measures are similar to the measures the Congressional Budget Office calculated for individual loans:

- The **share of original loan debt remaining** is the total remaining debt held by a cohort of borrowers, divided by the total amount they borrowed. This measure is similar to CBO's measure of the share of debt remaining, but it is assessed four years into the repayment period and uses the original loan amount as the denominator (that is, it excludes interest accrued while borrowers were in school).
- The **percentage of borrowers in a positive repayment status** is the proportion of borrowers whose loans are not in default, delinquent (that is, behind on payments), or in forbearance. Deferment—for example, due to a borrower's return to school—is classified as a positive repayment status by the Department of Education. Thus, positive repayment status, which is measured three years into the repayment period, differs from the "in repayment" status discussed earlier.

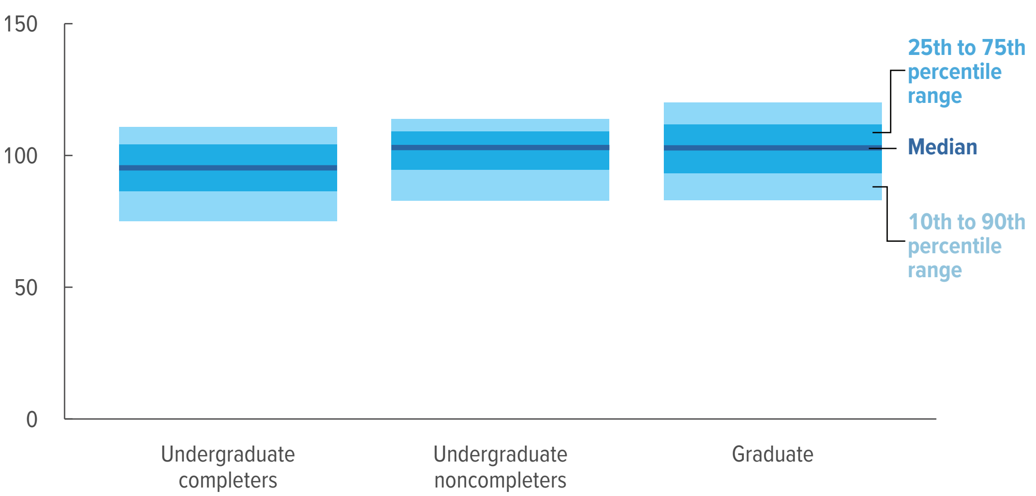
CBO used the Department of Education's measures to examine how repayment outcomes varied for students at different institutions and for students enrolled in different programs.

Repayment Outcomes Among Institutions, by Borrowers' Degree Level and Completion

Among institutions, the median share of original loan debt remaining was smaller at year 4 for borrowers who completed their program than for borrowers who did not—even though borrowers in the former group took on more debt to finance their studies. (At a school where student loan debt was in the middle of the distribution, debt averaged $14,900 for undergraduate students who completed their program and $9,200 for those who did not.)

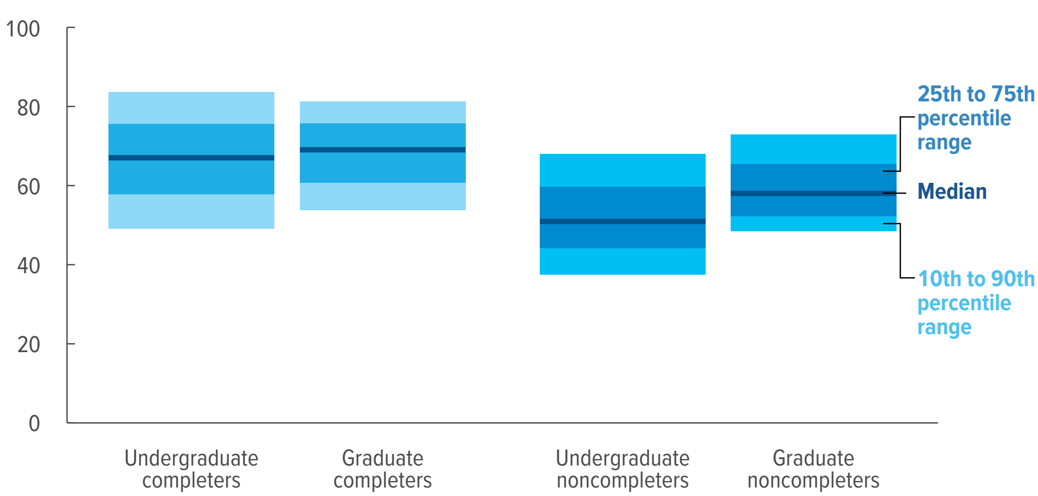
Repayment outcomes for borrowers in both groups varied depending on their institution. Although the range of outcomes among institutions is smaller than the range among all loans, it is nevertheless substantial and shows that institutions have an influence on loan repayment outcomes.

Shares of Original Loan Debt Remaining at Year 4, by Degree Level and Completion



Borrowers who completed their undergraduate program generally made more progress paying down their loans than did noncompleters or borrowers in graduate programs, who were eligible for larger loans. However, the range of debt remaining for each of the three groups overlapped substantially.

Percentage of Borrowers in a Positive Repayment Status at Year 3, by Degree Level and Completion



Degree completion was associated with more successful loan repayment at both the undergraduate and graduate levels.

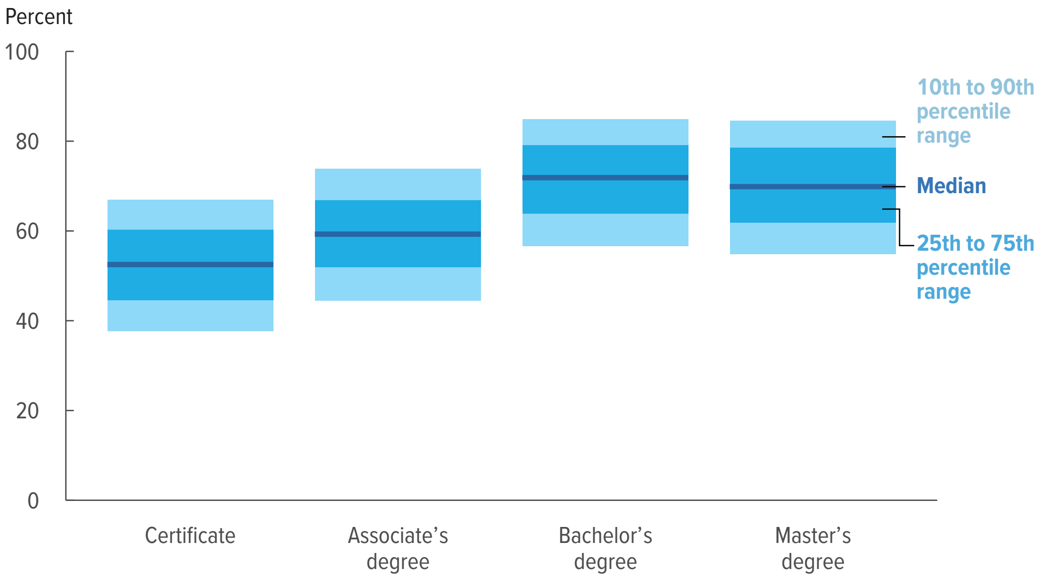
Among undergraduate borrowers who completed their program, the share of borrowers in a positive repayment status ranged from 49 percent to 84 percent between institutions at the 10th and 90th percentiles.

Positive Repayment Status Among Programs, by Degree Level

Three years into the repayment period, programs leading to a certificate or an associate's degree had smaller fractions of borrowers in a positive repayment status than did programs leading to a bachelor's or advanced degree. (That includes borrowers who did not complete their degree program.)

Variation among programs was substantial. For example, for associate's degree programs, the fraction of borrowers in a positive repayment status was 45 percent at the 10th percentile and 74 percent at the 90th percentile. For programs leading to a bachelor's degree, those fractions were 57 percent and 85 percent, respectively.

Percentage of Borrowers in a Positive Repayment Status at Year 3, by Degree Level



Among certificate programs, the median fraction of borrowers in a positive repayment status was 53 percent.

That fraction was higher—72 percent—among programs leading to a bachelor's degree.

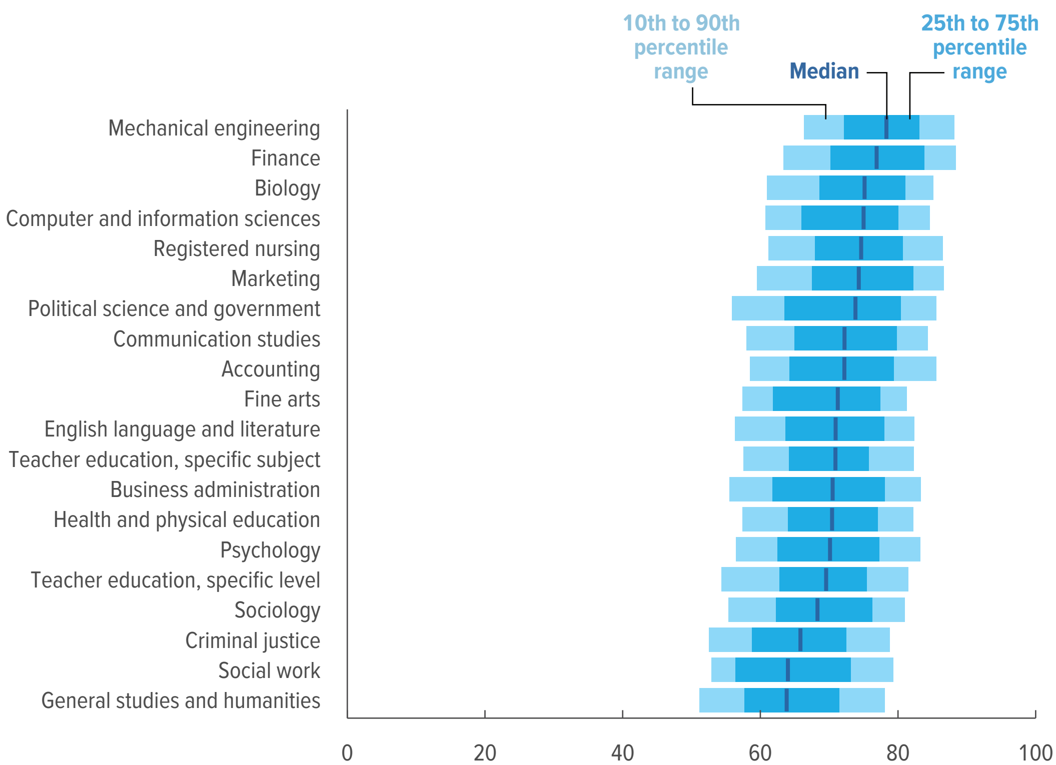
Positive Repayment Status Among Programs, by Field of Study

Job opportunities for college graduates vary by field of study, and poor job opportunities could affect the ability of borrowers in some fields—or at a given institution—to pay down their student loans. To examine how borrowers' fields of study influenced their repayment outcomes, CBO tabulated the proportion of students in 234 bachelor's degree programs who were in a positive repayment status three years into the repayment period. Some of those programs were offered at many schools and some at very few. The figure below displays results for the 20 most common programs—from business administration, offered at 654 schools, to computer science, offered at 125 schools.

At year 3, most borrowers in all fields were in a positive repayment status. Within each field of study, however, that fraction varied substantially from school to school. Among English language and literature programs, for example, the median fraction of borrowers in a positive repayment status was 71 percent, but among all 185 schools with such programs, that fraction ranged from 56 percent at the 10th percentile to 82 percent at the 90th percentile.

Percentage of Borrowers in a Positive Repayment Status at Year 3, by Field of Study

Percent



Borrowers in technical or scientific programs were more likely than borrowers in liberal arts or social science programs to have loans in a positive repayment status.

Appendix A: Additional Information About Federal Student Loans

This appendix discusses federal student loans and describes proposed changes to rules governing their repayment.

Types of Loans

From 1965 to 2010, the federal government guaranteed loans issued by banks and nonprofit lenders through the Federal Family Education Loan Program (FFELP). In 1994, lawmakers established the William D. Ford Federal Direct Loan Program, which directly issued student loans with funds provided by the Treasury. The two programs operated in parallel, originating loans under nearly identical terms, until the Health Care and Education Reconciliation Act eliminated new FFELP loans in 2010. Since then, all new federal student loans have been made through the direct loan program.

There are three main types of student loans: subsidized Stafford, unsubsidized Stafford, and PLUS loans. **Subsidized Stafford loans** are available to undergraduate students with financial need. Those loans do not accrue interest until payments are due (in other words, the government subsidizes the interest), whereas other loans begin to accrue interest after they are disbursed. **Unsubsidized Stafford loans** are available to both undergraduate and graduate students irrespective of their financial need. **PLUS loans** are available to graduate students and the parents of undergraduate students. (Parent PLUS loans were excluded from the analysis in this report.)

The various loans are subject to different limits and have different interest rates. The amount of each type of loan is limited by the student's expected cost of attendance; Stafford loans are further limited on the basis of the borrower's academic level and dependency status.[1]

After leaving school, students with multiple loans can combine them into a **consolidation loan** with an interest rate that is a weighted average of the interest rates on the original loans. Those borrowers usually receive two consolidation loans: one for subsidized loan debt and one for unsubsidized loan debt.

Repayment Plans and Payments

When borrowers leave school, the Department of Education assigns them a **loan servicer**—a company that handles billing and other services related to federal student loans. Those services include enrolling the borrower in one of three types of repayment plans. **Fixed-payment plans** are assigned by default when a loan enters the repayment period and are the most common type of plan; monthly payments under those plans are usually sufficient to repay the loan principal and interest over a 10-year period. **Graduated-payment plans** have monthly payments that rise over time. **Income-driven repayment (IDR) plans** require monthly payments equal to a fixed share of the borrower's income over a threshold—typically 10 percent of discretionary income.[2] Although some repayment plans have eligibility conditions, student borrowers have wide leeway to choose an initial plan and to switch plans without penalty.

Borrowers may make payments at any time, even when a loan is not in repayment status, but to avoid delinquency, they must make minimum monthly payments while the loan is in that status. Those minimum payments vary depending on a borrower's repayment plan,

1. Independent students generally have higher borrowing limits. Students are considered independent if they are at least 24 years old, married, a graduate or professional student, a veteran or member of the armed forces, an orphan, a ward of the court, someone with legal dependents other than a spouse, an emancipated minor, or someone who is experiencing or at risk of experiencing homelessness.

2. Before the coronavirus pandemic, "discretionary income" in most IDR plans was defined as annual income over 150 percent of the federal poverty guideline for the borrower's family size and state of residence. For a more detailed discussion of IDR plans, see Congressional Budget Office, *Income-Driven Repayment Plans for Student Loans: Budgetary Costs and Policy Options* (February 2020), www.cbo.gov/publication/55968. In July 2023, the Department of Education issued final regulations regarding the Saving on a Valuable Education (SAVE) IDR plan, which will require undergraduate borrowers to pay 5 percent and graduate borrowers to pay 10 percent of discretionary income, defined as income over 225 percent of the poverty guideline.

loan type, and (for IDR plans) income. Under the standard fixed-payment plan, the minimum payment a borrower must make for all loans taken together is $50 per month. For loans in IDR plans, the minimum payment amount is typically $5 or $10 per month, but borrowers with sufficiently low income have required payments of zero dollars, which count toward the total number of payments required for forgiveness.[3]

Fixed-term and graduated repayment plans typically have a 10-year repayment period, whereas IDR plans typically have a 20- or 25-year repayment period.[4] IDR plans forgive any loan balances that remain at the end of the repayment period.

Interest Accrual

Interest rates on student loans are set by law and depend on many factors: when the loan was disbursed; whether the borrower uses the loan for undergraduate or graduate study; whether the loan is subsidized, unsubsidized, or a PLUS loan; and, for subsidized loans, whether the loan is in deferment or a grace period. For example, interest rates have been higher for loans to graduate students than for loans to undergraduate students since the 2013–2014 academic year.

Interest on student loans accumulates daily and is calculated using a daily interest rate applied to the principal balance; the daily interest rate is the loan's annual interest rate divided by the number of days in the year. Monthly payment amounts in fixed- and graduated-payment plans cover those interest costs, and some IDR plans waive part or all of a loan's interest accrual. However, unpaid interest will accrue if borrowers do not make payments or if their scheduled payments are very small.

Accrued interest balances are maintained separately from principal balances, but certain events cause interest to be **capitalized**, or added to the loan's principal balance. At that point, the interest balance is reset to zero and interest accrual is based on the new, higher principal balance. Capitalization events thus result in faster compounding of loan interest. For unsubsidized loans, capitalization of unpaid interest occurs at the end of a period of deferment. (Interest generally does not accrue in such periods for subsidized loans.) Other capitalization events include loan consolidation and exit from the original income-based repayment plan.

Outcomes for Borrowers Who Cannot Pay

Some student loan borrowers who cannot make payments on their loans can pause their payments. Those who are returning to school, entering military service, undergoing certain medical treatments, or experiencing economic hardship may be eligible for deferment, during which interest does not accrue on subsidized loans. Borrowers who are not eligible for deferment but are facing economic hardship can request forbearance, which pauses loan payments but not interest accrual.

Borrowers who do not obtain permission to pause payments through deferment or forbearance but who fall behind on loan payments become delinquent and may eventually enter default. Under the Higher Education Act, default occurs when payments are at least 270 days late; after 360 days, borrowers lose the ability to change repayment plans or to resolve their delinquency through recurring payments, forbearance, or deferment. At that stage, borrowers can exit default by taking out a consolidation loan, entering a loan rehabilitation plan, or repaying their loans in full.[5]

Default is costly for borrowers, both because it hurts their credit rating and because it results in additional fees and interest accumulation. Borrowers with loans in default also lose eligibility for certain benefits, including forbearance and deferment of those loans and access to federal student aid (including Pell grants). Once a loan enters default, payments are due immediately, and borrowers who do not make payments risk being sued by their loan servicer to collect the debt. Student loan debt typically cannot be discharged through bankruptcy, and the government has several ways to recover unpaid student loan debt, including wage garnishment and Treasury offset (that is, garnishment of tax refunds or other government payments). Most student loan

3. For information on the terms governing federal student loans, see Alexandra Hegji, *Federal Student Loans Made Through the William D. Ford Federal Direct Loan Program: Terms and Conditions for Borrowers*, Report R45931, version 12 (Congressional Research Service, June 26, 2023), https://tinyurl.com/yuvrbf63.

4. Borrowers repaying a consolidation loan and opting for a fixed- or graduated-payment plan can have a term longer than 10 years, depending on the loan balance at the time of consolidation.

5. Under loan rehabilitation plans, borrowers agree to make nine monthly payments over a 10-month period, with payment amounts determined by their income. If borrowers make those payments, the default ends and they can continue with their repayment plan, switch to an IDR plan, or apply for forbearance.

debt that enters default is ultimately recovered by the government.[6]

Measures of Schools' Accountability

Colleges and universities benefit from the federal student loan program, but they may have a limited financial stake in loan repayment outcomes. For that reason, the Department of Education uses the **cohort default rate (CDR)** to hold institutions accountable for the quality of schooling they provide. The CDR measures the fraction of student borrowers with loans in default approximately three years after their repayment period begins. The rate is calculated for each annual cohort of loans (that is, all loans entering repayment within the same fiscal year) at each institution. Institutions whose CDR equals or exceeds 40 percent in one year may lose access to federal student loans; those whose CDR equals or exceeds 30 percent for three consecutive years may lose access to federal student loans and Pell grants.

In recent years, the CDR has rarely caused schools to be sanctioned. Because income-driven repayment plans may delay but do not necessarily prevent default, their increasing popularity may have made the CDR less effective as an accountability measure. And institutions might avoid accountability under the CDR measure by encouraging students at high risk of default to enroll in IDR plans or seek forbearance.

Some policymakers have therefore proposed alternative measures of accountability based on the frequency of borrowers' payments or on the fraction of their debt remaining.[7] For example, the Promoting Real Opportunity, Success, and Prosperity Through Education Reform Act (H.R. 4508 in the 115th Congress) would have replaced the institution-level CDR with a program-level metric: the loan repayment rate, or the fraction of borrowers in a cohort who have repaid or are actively repaying their loans or whose loan payments have been paused because the borrower is performing military service or has reenrolled in school.

6. For information about the aftermath of default, see Jason D. Delisle, Preston Cooper, and Cody Christensen, *Federal Student Loan Defaults: What Happens After Borrowers Default and Why* (American Enterprise Institute, August 13, 2018), https://tinyurl.com/k2c6cb2r.

7. See Tiffany Chou, Adam Looney, and Tara Watson, *Measuring Loan Outcomes at Postsecondary Institutions: Cohort Repayment Rates as an Indicator of Student Success and Institutional Accountability*, Working Paper 23118 (National Bureau of Economic Research, February 2017), www.nber.org/papers/w23118.

Recent and Proposed Changes to the Federal Student Loan Program

Some recent legislative changes and executive actions have significantly affected the repayment of current and future student loans. Under the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020 (Public Law 116-136) and through subsequent executive actions, federal student loans were placed in forbearance and interest accrual and loan payments were suspended in response to the coronavirus pandemic. Although some borrowers continued to make payments on their outstanding student loans, most paused or slowed those payments. The net result of those changes was to slow the repayment of student loans without raising borrowers' accumulated debt. Interest accrual on federal student loans resumed on September 1, 2023, and payments resumed in October 2023.

In July 2023, the Department of Education released a final rule creating an IDR plan with more generous repayment terms: the Saving on a Valuable Education (SAVE) plan. That plan shortens the period of required payments for borrowers with smaller balances, exempts more of borrowers' income from the definition of discretionary income, and lowers the percentage of discretionary income that undergraduate borrowers must pay on their loans. The plan also eliminates the accrual of unpaid interest when a borrower's payment does not cover the entire amount of interest due and automatically enrolls qualified borrowers once they are 75 days late in making payments under another plan.

Given the generosity of the SAVE plan, the Congressional Budget Office expects it to attract borrowers and boost enrollment in IDR plans. More borrowers will be eligible for zero-dollar monthly payments under the SAVE plan than under other IDR plans, and because the plan eliminates the accrual of unpaid interest, balances will not grow while loans remain in repayment status. CBO expects that if the SAVE plan remains in place, it will raise the cost of the student loan program to the federal government.[8]

8. Recently proposed legislation would eliminate the SAVE plan and make several other changes to the student loan program. H.R. 6951, which was ordered to be reported by the House Committee on Education and the Workforce on January 31, 2024, would create a new IDR plan to replace all current IDR plans, change loan limits, and require certain institutions to make payments to the federal government based on borrowers' repayment of their loans. As of the publication of this report, there is ongoing litigation challenging the SAVE plan.

Other executive actions finalized since the CARES Act, unless reversed, will also affect student loan debt, loan repayment, and the federal cost of the student loan program. Those actions make it easier to obtain loan forgiveness through the Public Service Loan Forgiveness program and expand eligibility for the discharge of loans. They also prevent certain events from triggering the capitalization of interest. As a result, interest will no longer be added to a borrower's principal balance when that borrower enters the repayment period, exits forbearance, or leaves any IDR plan other than the original income-based repayment plan.

In September 2023, the Department of Education introduced a onetime, temporary program offering special benefits to borrowers with student loans in default. Borrowers in that program have their loans returned to in-repayment status, and the record of default is removed from their credit reports. That program is scheduled to end on September 30, 2024.

The Administration has proposed further changes to the federal student loan program. In August 2022, the Administration proposed canceling up to $10,000 of student loan debt for borrowers with income below specified limits and an additional $10,000 for such borrowers who received at least one Pell grant.[9] The Supreme Court ruled in June 2023 that the Administration did not have authority under federal law to forgive that student loan debt. In April 2024, the Administration published a notice of proposed rulemaking to provide additional cancellations of student loan debt. Under the proposed rules, borrowers who were eligible for loan forgiveness under the SAVE plan or other forgiveness programs would have their debt canceled regardless of whether they had applied for or enrolled in those programs. Additionally, certain borrowers who entered their repayment period more than 20 years ago would have their remaining balance forgiven.

9. See Congressional Budget Office, *Costs of Suspending Student Loan Payments and Canceling Debt* (September 2022), www.cbo.gov/publication/58494.

Appendix B: Data and Methods

This appendix provides an overview of the data sources and methods used by the Congressional Budget Office to analyze the repayment of federal student loans.

Data Sources

To assess changes in student loan repayment over time, CBO relied on data from two sources: the National Student Loan Data System (NSLDS) and the College Scorecard.

The National Student Loan Data System

The analysis in this report was based primarily on data from the NSLDS—the Department of Education's central database of information about student aid, including student loans. For each individual loan, the NSLDS identifies the borrower, the associated institution, and any repayment plans; it also provides information about loan repayment, including repayment statuses and account balances over time.

Analytic Sample. CBO's analysis was based on loans taken out by a random sample of 4 percent of borrowers from the NSLDS extracted in November 2021. Loans to undergraduate and graduate students authorized under title IV of the Higher Education Act and used for study at a domestic institution were included.[1] Loans to parents of undergraduate students were excluded because they could not be easily linked to particular students and because the current measure of accountability, the cohort default rate (CDR), excludes PLUS loans to parents.[2]

The analysis focused on loans whose repayment periods began between July 2009 and June 2013. Accordingly, repayment on many of the loans began shortly after the 2007–2009 recession. In the aftermath of the recession, college attendance and student loan originations grew; that growth is reflected in the sample by larger cohorts of loans entering repayment in later years. About 19 percent of loans in the sample entered repayment in the first year of the sample period, between July 2009 and June 2010, and 30 percent entered repayment in the fourth and final year.

CBO followed each cohort of loans for six years, through June 2019 for the final cohort. That window of analysis avoided changes in repayment rules associated with the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020, which was enacted in response to the coronavirus pandemic, and subsequent executive actions. (Those changes are described in Appendix A.)

By following loans for six years, CBO was able to analyze a sizable proportion of the repayment period for most loans taken out by recent borrowers. Perhaps because young adults' income tends to rise as they age, loan repayment often improves during the early life of loans. Therefore, observed improvements probably continued beyond the six-year window.

In CBO's assessment, accountability measures are more effective if they reveal problems early in the repayment period, but measures based on a larger fraction of a loan's history are more reliable indicators of final outcomes. This report's analysis of loan outcomes over the first six years of repayment allows investigation of that trade-off.

Imputed Data. Consolidation loans can combine loans that were taken out at different times or used to finance education at different institutions. (For more on consolidation loans, see Appendix A.) To identify the start of the repayment period and the associated institutions for those loans, CBO had to link them to all of their precursor loans. The NSLDS maintains files that link precursor and consolidation loans, but in CBO's assessment, those files are incomplete. Because the NSLDS includes information about all loans for a sample of borrowers, CBO was able to construct a more complete set of links by joining the loans ending in consolidation to the consolidation loans for each borrower.

1. Title IV authorized federal student aid programs, including the Federal Pell Grant, Federal Family Education Loan, and Federal Direct Loan Programs and work-study programs.

2. Parent PLUS loans tend to be larger than other loans: Despite making up 4.5 percent of all loans entering repayment within the period CBO analyzed, parent PLUS loans accounted for 9 percent of the total value of loan disbursements. Those loans were also less likely to default and more likely to be paid off.

CBO used different linkage methods for loans issued under the Federal Family Education Loan Program (FFELP) and the William D. Ford Federal Direct Loan Program (FDLP). Loans issued under the FFELP were assigned links if they were associated with the same borrower and if the likely precursor loans' ending date was within 60 days of the consolidation loan's starting date. Loans issued under the FDLP were linked if they met those criteria and if the ending and starting loans were of the same type (subsidized or unsubsidized).[3]

CBO considered a link to be valid if the total ending balance of likely precursor loans was between 80 percent and 120 percent of the amount disbursed under the consolidation loan. Among valid links, total ending balances of precursor loans averaged 99 percent of the amount disbursed under the consolidation loan. For consolidation loans with valid links, payments and remaining balances were attributed to the precursor loans in proportion to their balances just before consolidation.

Exclusions and Final Sample. CBO's final sample comprised about 2.7 million loans. Before CBO linked consolidation loans to their precursor loans, about 2.9 million loans met the inclusion criteria for this analysis. Of those, 28.1 percent were consolidated within the sample period, and 8.2 percent were excluded because of the linkage process: about 107,000 because they were not included in the linkage files, and an additional 121,000 that were represented in the linkage files but had total final balances substantially different from the consolidation loan's initial balance. CBO could not determine whether additional payments were made at the time of consolidation or whether the linkage files recorded some but not all of the precursor loans.

In the final sample, 42.8 percent of loans were subsidized loans to undergraduates, 40.1 percent were unsubsidized loans to undergraduates, and 17.1 percent were loans to graduate students. Most loans to graduate students were unsubsidized loans, which have lower fees and interest rates than graduate PLUS loans; only 1.6 percent of the loans in the final sample were graduate PLUS loans. About 57 percent of the loans were originated under the FDLP; the remainder were originated under the FFELP.

The College Scorecard

The Department of Education's College Scorecard combines data from the NSLDS with information about borrowers' earnings from the Treasury and information about postsecondary institutions' student demographics, tuition levels, and other characteristics from the Integrated Postsecondary Education Data System.

The College Scorecard includes two sets of data on student loan repayment. One provides measures at the institutional level for approximately 5,000 schools; the other provides measures at the program level (such as measures for undergraduate psychology majors) for approximately 210,000 programs among many institutions. Those measures are based on all student loans, not a sample of loans. (Because the repayment measures CBO estimated from the NSLDS are based on a 4 percent sample of loans, they do not cover certain institutions and programs.)

Updated College Scorecard data are released about twice a year. With each update, the Department of Education provides the most recent data on all variables in one file as well as updated data for earlier cohorts in separate files. CBO's analysis in this report was based on the data released on September 14, 2022.

Chapter 1: Types of Debt and Cohort Default Rates

Estimates of household debt and its sources come from the Federal Reserve Bank of New York's *Quarterly Report on Household Debt and Credit*.[4]

The CDR is the percentage of a school's borrowers with loans in default approximately three years after entering the repayment period. (For more details about the CDR, see Appendix A.) CDRs are available from the College Scorecard. The estimates shown in Chapter 1 are for loans that entered repayment in fiscal year 2016.

Chapter 2: Measures of Repayment

CBO's analysis focused on repayment patterns for individual loans, including their status and payments, measured on a monthly basis. For that purpose,

3. When some of a borrower's precursor loans are subsidized and others are unsubsidized, the subsidized loans are consolidated into one loan and the unsubsidized loans are consolidated into another. Precursor loans issued under the FDLP can be linked to their consolidation loan using a database field in the NSLDS indicating whether the loan was subsidized or unsubsidized. That indicator is not available for loans issued under the FFELP.

4. Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit—2023: Q2* (August 2023), https://tinyurl.com/wrbavwax.

CBO defined months as having a uniform length (365.25 days ÷ 12), with the first month beginning on the first day of a loan's repayment period.

The Repayment Period

The Department of Education determines the start date of Stafford loans' repayment periods for the purpose of defining cohorts of students as they leave school. Graduate PLUS loans are not tracked for that purpose. CBO defined the start of the repayment period for those loans as the start of the repayment period for the borrower's last observed Stafford loan. (That imputation assumes that the repayment periods for borrowers' graduate PLUS and Stafford loans began on similar dates.)

Repayment Status

At any given time, each loan in the NSLDS is assigned a detailed status value. CBO grouped those values into six categories:

- **Loans in default** included those with detailed status values indicating an unresolved default, an active bankruptcy claim, or default plus some further condition relevant to the student loan program—indicating, for example, a loan in litigation, terminated collections, or a borrower's disability or resumption of payments.
- **Loans in forbearance or in deferment because of economic hardship** included those with a status value of forbearance and those with a status value of deferment, provided that the deferment was for an economic reason.[5]
- **Loans in deferment for school attendance or military service** included those with status values indicating deferment for noneconomic reasons or status values indicating that the loan was in a grace period.
- **Loans in repayment status** had status values indicating that they were in repayment or were temporarily ineligible for reinsurance and not in default. (Under the FFELP, the federal government provides reinsurance to the nonprofit and state agencies that guarantee student loans, which means it ultimately bears the risks associated with nonrepayment of those loans. FFELP loans held by private lenders may become ineligible for reinsurance when the lender fails to take certain required actions, such as actively pursuing payments on a delinquent loan.)
- **Loans paid in full** had status values of paid in full, presumed paid in full, or defaulted then paid in full. Loans with an outstanding balance of zero but with other status values were also included in this category.[6]
- **Loans in the discharged category** had status values indicating that the loan was canceled or discharged; that the borrower had suffered fraud, become disabled, or died; that the loan had been purchased by the borrower's school; or that a defaulted loan had been written off or discharged.

Student borrowers usually take out loans for more than one school term, in which case each loan's status partly depends on when the loan was taken out. For example, if a student with loans leaves school for more than six months, those loans will enter the repayment period. If the student subsequently returns to school before paying off the loans, they are eligible to go into deferment. By contrast, loans taken out by students who pursue a continuous course of study will enter the repayment period at the same time without going into deferment. (Some loans in the sample might have been in deferment before they entered repayment—that is, prior to the period of time CBO analyzed.)

CBO used loan status, especially status values of in repayment and default, to measure additional repayment outcomes. For each month after a loan entered the repayment period, CBO defined the **percentage of time in repayment status** as the cumulative number of months the loan had been in that status, divided by the number of months since the start of the repayment period in which the loan had a positive balance.[7]

CBO defined the **default rate** in any given month of the repayment period as the fraction of loans in default during that month. That default rate differs from the

5. A separate indicator in the NSLDS specifies reasons for deferment. CBO classified deferment as being for economic reasons if that indicator signified either economic hardship or unemployment. For 2 to 3 percent of deferred loans, that indicator was missing. For those records, CBO imputed a value based on probabilities associated with characteristics of loans, students, and institutions. Detailed reasons for forbearance are not available in the NSLDS, so CBO treated all instances of forbearance as indicating economic hardship.

6. Among loans with a status value of in repayment, 0.6 percent had no outstanding balance. Classifying those loans as paid in full had a small effect on estimates of payments made while in repayment status.

7. This treatment combined multiple spells in repayment for loans that exited and subsequently reentered repayment status during the sample period.

CDR in several ways. The CDR follows each cohort of borrowers entering their repayment period during a given fiscal year and measures default status before the end of the second following fiscal year. The CDR is calculated as a rate among borrowers, rather than as a rate among loans, and is based on all loans used to attend an institution, rather than a sample of those loans. The CDR does not incorporate PLUS loans. Finally, in a variety of special circumstances, the Department of Education excludes borrowers from the numerator and denominator of the CDR calculation, and information on those circumstances is unavailable in the NSLDS.

Share of Debt Remaining

At any point in time, each NSLDS loan record shows the loan's principal balance and any accrued interest that has not yet been incorporated into the principal. The outstanding balance is the sum of those two items. If a loan's status indicated that a loan had been discharged or paid in full but the loan's outstanding balance was missing, CBO assigned a balance of zero.[8] The final records for some loans showed an interest balance much larger than the principal balance. For those loans, CBO assigned a final interest balance of zero if the loan had a principal balance of zero and assigned the last prior interest balance otherwise.

CBO measured the share of debt remaining as the outstanding balance on the last day of a given month, divided by the outstanding balance on the date the loan entered its repayment period. If the outstanding balance on the date the loan entered repayment was zero, for the purpose of determining the share of debt remaining, CBO assigned the first positive value observed in the following six months. If the share of debt remaining was greater than 200 percent, CBO assigned a value of 200 percent.

Frequency of Payments

For each month in a loan's history, CBO calculated the cumulative number of payments greater than $10 that had been made while the loan was in repayment status, divided by the cumulative number of months the loan had spent in repayment status.[9] In the main text, those estimates are averaged across loans and described as outcomes for the average loan. For example, if payments were expected in 12 months for Loan A but zero substantive payments were made, and payments were expected in all 72 months for Loan B and all were fulfilled with payments greater than $10, then the frequency of payments would be zero for Loan A and 100 percent for Loan B, and the average frequency for the sample would be 50 percent.

To provide an alternative measure of payment frequency, CBO also calculated the total number of substantive monthly payments among all loans in the sample, divided by the total number of months in repayment status for all loans. Those estimates are described in the main text as estimates for the average month in repayment status. Under that approach, loans that spent more months in repayment status receive more weight; as a result, for Loan A and Loan B in the previous example, the average frequency of payments is higher (86 percent). For further discussion of weighted estimates, see Appendix C.

The NSLDS did not record payments consistently for all the loans in the sample, so CBO imputed payment amounts based on changes in loans' balances and interest rates.[10] The Department of Education periodically updates each loan's balances of remaining principal and accrued interest.[11] CBO inferred whether or not a payment was made when those data were updated. CBO calculated monthly payment amounts by subtracting the actual change in a loan's total balance from the expected change without a payment. If the difference exceeded $10, CBO assumed that a substantive payment had been made. The $10 cutoff was designed to minimize the effects of any imputation errors. (For example, the imputation of a $5 payment when no payment had been made would not count under the $10 threshold but would count under a $5 threshold.) However, because some loans repaid under income-driven repayment plans (described below) have scheduled monthly payments of $10 or less, a lack of substantive payments may not indicate failure to fulfill the terms of a loan.

8. Loan status codes of "disability" or "defaulted, then disabled" indicate that a loan has not been discharged. CBO did not set loan balances to zero for those loan status codes. Other loan status codes for disability indicate that a loan is closed and any remaining balance discharged; in those instances, CBO set the balance to zero.

9. Only months during which loans had a positive balance were included in that calculation.

10. Federal loan servicers have reported borrowers' loan payments since 2016, but fiscal year 2017 is the first fiscal year for which records appear to be complete when compared with published estimates.

11. Those balances do not include other fees, such as late fees and insufficient funds fees.

A loan's balance in the absence of a payment was estimated by applying the loan's interest rate to the principal balance recorded in the previous update. To estimate interest accrual, CBO multiplied the loan's implied daily interest rate (the loan's annual interest rate divided by the number of days in the year) by the number of days since the last recorded loan balance.[12] The NSLDS records the interest rate at a loan's origination. For loans with variable interest rates, CBO updated the interest rate in accordance with changes to the variable portion of the interest rate.[13] The interest rate for a consolidation loan was the average of the interest rates for its precursor loans, weighted to reflect the loans' balances just before consolidation. Subsidized loans in deferment were assigned an interest rate of zero for the duration of that deferment.

Some loan histories were updated at a less-than-monthly frequency. In those instances, CBO determined that there were two substantive monthly payments if two months passed with an imputed payment of more than $20 and three substantive monthly payments if three months passed with an imputed payment of more than $30. If more than three months passed without an update, which occurred for about 2 percent of the records, CBO imputed a single substantive payment.

Chapter 3: Characteristics of Loans and Borrowers

Chapter 3 describes associations between repayment outcomes and selected characteristics of loans and borrowers. Many of those characteristics are fixed over a loan's history and maintained directly in the NSLDS. CBO used data from the NSLDS to impute other characteristics for the purposes of this report.

Repayment Plans

The NSLDS records repayment plans for each loan in CBO's sample, but for some loans, no plan was listed. For those loans, CBO imputed a fixed-payment plan (the default plan for student loans upon entering the repayment period). Each other loan's repayment plan was defined as the plan in effect five years after the loan entered repayment. Plans were divided into three main groups:

- Repayment plans that varied payments as a function of a borrower's earnings were categorized as **income-driven repayment (IDR) plans**. Those plans were identified in the NSLDS as PAYE, income-contingent, income-based, REPAYE, income-sensitive, or alternative negative amortization plans.[14]
- Repayment plans that varied payments over a loan's history, but in a predetermined manner, were categorized as **graduated-payment plans**. Those plans were identified in the NSLDS as graduated, consolidation graduated, extended graduated, alternative graduated, or graduated 10-year repayment plans.
- All other plans were categorized as **fixed-payment plans**.

Borrowers' Characteristics

CBO determined the highest level of schooling that a borrower financed with a loan by examining all loans in the NSLDS database for each borrower. The NSLDS data used for this report covered loans disbursed as late as November 2021. Because borrowers could have taken out more loans after that date, their highest observed level of schooling may not reflect their ultimate educational attainment. However, their observed level of schooling reflects their earning potential during the six-year period of repayment that CBO analyzed.

To determine whether students had received a Pell grant, CBO used information on grant recipiency maintained in the NSLDS database. The Department of Education determines Pell grant eligibility from the Free Application for Federal Student Aid (FAFSA), and eligibility generally requires low income or other forms of financial hardship. Pell grant recipiency thus implies that the borrower filed a FAFSA application, was determined to be eligible, and chose to take the grant.

Chapter 4: Characteristics of Institutions

To determine how repayment outcomes varied among different types of institutions and among institutions whose students completed degrees at different rates,

12. Some IDR plans waive part or all of a loan's accrued interest when a borrower's payments will not cover it. The amount of interest waived depends on whether the loan is subsidized or unsubsidized and how long ago it entered the repayment period.

13. Loans with variable interest rates were disbursed before July 1, 2006. The interest rates for those loans are adjusted annually and equal the interest rate on specified government bonds, plus a fixed premium.

14. Income-contingent and some income-based plans require monthly payments that are a greater fraction of the borrower's discretionary income than payments in other IDR plans. Income-sensitive plans are available to low-income FFELP loan borrowers. Alternative negative amortization plans are provided to FDLP borrowers who can demonstrate that the terms and conditions of other available plans cannot accommodate their exceptional circumstances.

CBO supplemented NSLDS data with data on institutions' characteristics from the College Scorecard.

The NSLDS classifies schools as for-profit, public, or nonprofit. To further classify institutions as two-year or four-year schools, CBO used data from the College Scorecard to identify the predominant degree granted by a school. If information on the predominant degree granted was unavailable, the classification was based on the institution's highest degree granted. Under that definition, institutions offering bachelor's or graduate degrees were classified as four-year schools, and other institutions, including certificate-only institutions, were classified as two-year schools. To assess associations between those institutional characteristics and repayment outcomes, CBO merged data from the NSLDS with the College Scorecard data, using identifiers in the NSLDS to distinguish campuses within institutions.

A campus's completion rate was defined as the fraction of students who completed a degree or program within 150 percent of the expected time to completion—specifically, within three years for two-year programs and within six years for four-year programs. (Completion rates in the College Scorecard reflect outcomes for prior cohorts of students; for example, four-year institutions report on students who matriculated six years earlier.) For institutions primarily following an academic-year system, completion rates covered only full-time, first-time students beginning in the fall semester. For institutions primarily following a nonacademic-year system—for example, those providing shorter program-based instruction—completion rates covered all full-time, first-time students. Such students make up fewer than half of all college students and even less at certain institutions (such as community colleges).

Because campus completion rates vary over time, CBO assigned values for 2013 or the closest year if the value for 2013 was unavailable. Earlier years were favored in cases of ties. For example, if a campus's completion rate was missing for 2012, 2013, and 2014 but was available for 2011 and 2015, CBO assigned the value for 2011. Completion rates were missing altogether for some institutions. Loans associated with those institutions were excluded from estimates of outcomes by completion rate, resulting in a 6.5 percent reduction in the loan sample for those estimates.

Chapter 5: Relationships Between Three- and Six-Year Outcomes

The estimates in Chapter 5 are based on the same data from the NSLDS and the same measures that underlie the estimates in Chapter 2. In the Chapter 5 estimates, loans were distinguished by whether or not they were in default at year 3, and default rates and the share of debt remaining for each set of loans were calculated as of year 6. Similarly, loans were distinguished by their share of debt remaining at year 3 (separated into quartiles), and default rates and the share of debt remaining for each set of loans were calculated as of year 6.

Chapter 6: Repayment Outcomes for Institutions and Programs

The College Scorecard provides two measures for programs that are similar to measures CBO calculated for individual loans: the dollar-based repayment rate and the borrower-based repayment rate.[15] CBO used those measures to create the figures in Chapter 6.

- **Share of original loan debt remaining.** This measure reflects the experiences of borrowers entering their repayment period between July 1, 2013, and June 30, 2015. The share of original loan debt remaining is the total debt remaining four years into the repayment period, divided by the total amount borrowed. In the other chapters, remaining debt is measured in relation to the balance when a loan entered the repayment period. Loan balances at that date are typically larger than the amount borrowed.
- **Percentage of borrowers in a positive repayment status.** This measure reflects the fraction of borrowers whose loans entered their repayment period between July 1, 2015, and June 30, 2017, and were not in default, delinquent, or in forbearance three years later. Unlike CBO's measure of the percentage of time in repayment status, this measure includes loans placed in deferment because of a borrower's return to school.

CBO assessed how those outcomes varied for students enrolled at different institutions or in different programs at institutions. Students were grouped by the following criteria:

- **Degree level and completion.** Undergraduate students at an institution are those in certificate,

15. For more information about those measures, see Department of Education, College Scorecard, "Data Documentation" (accessed September 2, 2024), https://tinyurl.com/3ssk5zk6.

associate's, and bachelor's degree programs. Graduate students are those in master's, first professional, and other advanced degree programs. Within both groups, CBO examined the differences between students who completed their studies and those who did not.

- **Field of study.** CBO focused on the 20 most popular fields (based on total enrollment at all institutions) among borrowers seeking a bachelor's degree.[16]

Accuracy of Imputed Payments

To assess the quality of its estimates of payments, CBO compared those estimates with records of actual payments and estimates from other sources.

Comparison With Actual Payments in the NSLDS

Since 2017, the NSLDS has maintained complete records of payments on loans. Those records allowed CBO to compare actual payments with a portion of the imputed payments in its analysis. To make that comparison, CBO identified records of payments made between 2017 and 2019 on loans included in the main analysis (principally loans that entered repayment between July 2009 and June 2013, excluding parent PLUS loans). Payments were analyzed only if they occurred within the first six years of a loan's repayment period and were made while the loan was in repayment status. The resulting dataset contained more than 9 million monthly records for about 664,000 loans.

On average, because of those restrictions, payments included in the comparison were made later, and applied to loans that were originated later, than payments in the main sample. For loans that were originated in June 2013, for example—the last month of the final cohort analyzed—the first payment recorded in the NSLDS occurred in January 2017, the 43rd month of the repayment period.

CBO's imputed monthly payments were largely consistent with the actual payments in the NSLDS for that subset of records: In 81 percent of the months, the actual and imputed monthly payment amounts were consistent in indicating whether or not a payment of more than $10 was made.

Comparison With External Estimates

CBO's estimates of the number of payments made on student loans differ from some estimates made by others. For example, JPMorgan Chase estimated that about 54 percent of families with student loans in 2019 consistently made positive monthly payments. But JPMorgan Chase's measure of payment frequency is conceptually different from CBO's, and it cannot be constructed from the underlying data that CBO used.[17]

Those differences partly reflect CBO's $10 threshold for payments. In the NSLDS dataset, 9.3 percent of monthly records indicated a positive payment of $10 or less. The period of analysis and the composition of the sample could also cause differences in estimated payments. For example, JPMorgan Chase's analysis included families with borrowers who had been in repayment status for more than six years and had made at least two student loan payments from a Chase checking account.

To gauge the effect of such differences, CBO conducted a separate analysis of actual loan payments made during 2017, using a broader set of student loans from the NSLDS. For that analysis, CBO identified FFELP and FDLP loans that were originated after 1989, entered repayment before 2017, remained open in 2017, and had multiple records of payments made between 2017 and 2019—including zero-dollar payments that may have fulfilled the conditions of IDR plans. Among those 3 million loans, during 2017, monthly payments greater than $10 were made in 5.2 months (43 percent of months), on average. That value, based on payments recorded in the NSLDS, suggests a lower payment rate than the 54 percent that was found by JPMorgan Chase.

16. Names of fields presented in this report are abbreviated. For the original names used in the College Scorecard data, see the data posted with this report at www.cbo.gov/publication/58963#data.

17. See Diana Farrell, Fiona Greig, and Erica Deadman, *Student Loan Payments: Evidence From 4 Million Families* (JPMorgan Chase Institute, July 2019), https://tinyurl.com/5cttnhr7.

Appendix C: Unweighted and Weighted Measures of Repayment

Most of the estimates in this report are **unweighted**, which means that all loans contribute equally to those estimates. This appendix discusses how those estimates would change if they were **weighted** by the amount of time a loan was in repayment status or by the amount of the loan's balance on the date it entered the repayment period. Weighted distributional statistics are provided in supplemental data accompanying this report.

Estimates Weighted by Time in Repayment Status

To estimate the frequency of payments, CBO initially calculated—for each loan—the percentage of months in repayment status (with a positive balance) in which a payment greater than $10 was made and then averaged that percentage across loans. Those estimates are unweighted. They summarize patterns of repayment over the early life of an average loan.

CBO also divided the total number of substantive payments on all loans by the total number of months in repayment status across all loans. Those estimates are weighted by the number of months a loan was in repayment status, and they describe payment frequencies for the average month in repayment among all loans—a different measure. Weighting in that fashion provides cross-sectional estimates of payment frequency. (For more details about the measures used in this analysis, see Appendix B.)

The loans that spent more time in repayment status were also the ones on which borrowers made more (substantive) payments. That correlation is strong. Therefore, the weighted estimates of payment frequencies are larger than the unweighted estimates by a substantial margin.

Estimates Weighted by Loan Balances

Weighting estimates by loan balances provides information more closely aligned with the dollar value of loan debt, as opposed to the number of loans.[1] For example, such estimates might better capture the average cost of student loans to the federal government. However, the current measure of institutional accountability—the cohort default rate, or the share of all borrowers at an institution who enter the repayment period in a fiscal year and default at the end of the third following fiscal year—is unweighted. Therefore, CBO's estimates are generally unweighted as well.

As measures of institutional accountability, unweighted and weighted estimates might have different implications. For example, consider a school where most student borrowers take out small loans and have trouble repaying them, but students who take out large loans repay the overwhelming majority of the funds they borrow. For that school, a weighted estimate of the share of debt remaining might show adequate repayment because most of the borrowed funds are repaid, even if most students fail to pay down their loans.

Weighted estimates suggest slightly better repayment outcomes than unweighted estimates do because larger loans tend to have better repayment outcomes. The differences are largest for estimates of the number of payments and the percentage of time in repayment status and are smallest for estimates of loans' default rates and share of debt remaining.

Those differences between weighted and unweighted measures largely held when CBO compared loans by repayment plan and type of institution.[2] Weighting tended to lower estimated default rates and to raise loans' estimated percentage of months in repayment status and percentage of months with a payment when in repayment status. By contrast, weighted and unweighted estimates of the share of debt remaining were roughly similar for most groups.

1. Alternatively, estimates could be weighted by the amount borrowed. The estimates under both weighting approaches would be very similar.

2. A table showing weighted and unweighted estimates is available as supplemental data accompanying this report at www.cbo.gov/publication/58963#data.

Overall, the differences between groups are generally similar whether the estimates are weighted or unweighted. For example, under either weighting choice, loans in income-driven repayment (IDR) plans have much lower default rates and slightly more months in repayment status than do other loans; likewise, loans to attend four-year public schools and nonprofit schools have lower default rates, higher fractions of time in repayment status, and higher fractions of months with a payment than loans to attend other institutions. One exception is in the percentage of monthly payments made in IDR and fixed-payment plans: Unweighted estimates show a slightly lower percentage for IDR loans by the sixth year of repayment, whereas weighted estimates show similar percentages for the two groups.

Appendix D: Comparison With an Updated Sample of Student Loans

The analysis in this report was based on an extract of data on student loans from the National Student Loan Data System (NSLDS). That extract was provided to the Congressional Budget Office by the Department of Education in December 2021. In June 2024, CBO received an updated extract of NSLDS data.

In addition to including a different sample of loans, the updated extract reflects corrections to errors in the NSLDS data that the Department of Education identified in its audit of its fiscal year 2023 financial statement.[1] Specifically, codes indicating repayment status were incorrect for some loans.[2] This appendix examines how estimates of measures of repayment that directly rely on those codes differ for the extract underlying the analysis in this report and the updated extract. The comparisons indicate small differences in overall estimates; those differences do not alter the substantive findings of this report.

The updated extract contains less information linking consolidation loans to their underlying loans. To accommodate those changes, CBO excluded consolidation loans and loans that were consolidated within the first six years of the repayment period from the samples analyzed in this appendix. The updated extract also included more loans that were canceled before they entered repayment. Very early cancellations may indicate that a prospective borrower did not proceed to take out a loan. Therefore, such loans were excluded from both samples in this analysis.[3] Otherwise, sample exclusions and data construction were the same as those used for the report.

1. Department of Education, *FY 2023 Agency Financial Report* (November 16, 2023), www2.ed.gov/about/reports/annual/index.html.

2. In some instances, the errors involved overwriting true status codes with codes indicating that a loan was in deferment.

3. For the analysis in the main report, loans canceled as of the date of origination were excluded.

For both samples of loans, CBO calculated the cumulative fraction of time spent in each loan status (see Table D-1). Over the first six years of the repayment period, for loans that entered repayment between July 2009 and June 2013, compared with the 2021 extract, those in the 2024 extract were:

- More likely to be paid in full, discharged, or in forbearance;
- Less likely to be in repayment or in deferment; and
- Similarly likely to be in default.

The differences between the two extracts could affect other measures of repayment used in this report, such as the fraction of months in which a payment greater than $10 was made while a loan was in repayment status. The fraction of months in repayment status with a substantive payment is 1 percentage point higher for loans in the 2024 extract than for loans in the 2021 extract.

In addition to the corrections of the errors in repayment status, other changes to the data could lead to differences in estimates of various repayment measures. Those changes include other updates to status codes—for example, updates reflecting loan cancellation or forgiveness.

The differences in the overall estimates for the two extracts are relatively small. Given the large variation in the estimates of repayment measures among loans and borrowers with different characteristics, those small differences indicate that corrections to the errors in the underlying data would be unlikely to change the findings in this report.

Table D-1.

Cumulative Fraction of Time in Each Loan Status

Percent

Repayment period	Paid in full or discharged	In repayment	In deferment	In forbearance	In default	Total
			2021 extract			
First 36 months	6.9	44.5	14.3	27.6	6.8	100
First 72 months	11.4	43.0	11.2	22.9	11.5	100
			2024 extract			
First 36 months	7.8	43.4	13.7	28.4	6.6	100
First 72 months	12.5	41.4	10.7	24.3	11.2	100
			Difference between extracts			
First 36 months	1.0	-1.1	-0.6	0.8	-0.2	
First 72 months	1.1	-1.6	-0.5	1.4	-0.3	

Data source: Congressional Budget Office. See www.cbo.gov/publication/58963#data.

The results shown here apply to loans to undergraduate and graduate students that were authorized under title IV of the Higher Education Act, were used for study at a domestic institution, and entered their repayment period between July 2009 and June 2013. Parent PLUS loans, consolidation loans, loans that were consolidated within the first six years of repayment, and loans that were canceled before they entered repayment were excluded from this analysis.

About This Document

This report was prepared at the request of the Chairwoman of the House Committee on Education and the Workforce. In keeping with the Congressional Budget Office's mandate to provide objective, impartial analysis, the report makes no recommendations.

Nabeel Alsalam, Elizabeth Ash (formerly of CBO), and Brooks Pierce prepared the report with guidance from Joseph Kile, Xiaotong Niu, and Julie Topoleski. Christina Hawley Anthony, Margot Berman, Sebastien Gay, Justin Humphrey, Wendy Kiska, Leah Koestner, Jeffrey Perry (formerly of CBO), and Emily Stern offered comments on the text, and Noelia Duchovny offered comments on the graphics. Julia Heinzel (formerly of CBO) fact-checked the report.

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Mark Doms, Jeffrey Kling, and Robert Sunshine reviewed the report. Christine Browne edited it, and R. L. Rebach created the graphics, illustrated the cover, and prepared the text for publication. The report is available at www.cbo.gov/publication/58963.

CBO seeks feedback to make its work as useful as possible. Please send comments to communications@cbo.gov.

Phillip L. Swagel
Director
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