Paying for college is one of the major financial milestones for many American families. Most families do save for college, but many still find it challenging to fully fund college expenses due to increasing tuition prices and competing financial goals, such as saving for retirement. Two surveys conducted earlier this year found that a promising 60% to 70% of families are saving for college, and many started saving before their children entered preschool. However, when it comes to whether the amount saved is sufficient to pay for all college expenses, a different picture emerges. Generally, parents still expect students to cover about 20% to 30% of their college expenses. As a result, many students borrow through federal student loan programs. Over the last decade, there are more students borrowing more money through these federal programs.

This report discusses the current landscape of federal student loan programs and recent policy developments to improve the current system. State and local government financial aid and the causes of increasing college expenses are beyond the scope of this report.

CURRENT LANDSCAPE OF THE FEDERAL STUDENT LOANS

How Large is the Federal Student Loan Balance and Who Borrows?

At the end of 2017, 44 million Americans collectively owed $1.4 trillion in student loans. Although the statistics vary slightly across different data sources based on student loan providers, the vast majority are federal student loans. Most of the $1.4 trillion balance was accumulated within the last decade; according to a study by the Office of Inspector General (OIG) in the Department of Education, the student loan balance was $687 billion at the end of fiscal year 2009, which means the outstanding loan balance has essentially doubled since the financial crisis. Around the last quarter of 2009, student loans also surpassed auto loans and credit card debt as the second-largest household debt for American families, only behind mortgages.

According to a Congressional Budget Office (CBO) study, in the 2015–2016 academic year, 37% of undergraduate students borrowed through federal student loans program with an average loan amount of $19,000, whereas 40% of graduate students borrowed an average amount of $63,000 (including their undergraduate borrowing). A Federal Reserve Board study expanded beyond federal student loans to include other borrowing channels used to finance college expenses, including credit cards, home equity lines of credit, auto loans, and borrowing from relatives. The study found that in 2017, more than half of young adults under 30 who attended college accrued debt to finance their tuition, with average debt between $20,000 and $25,000.

Federal Student Loan Programs

The federal government generally supports postsecondary education finance through loans, grants, and tax preferences, with student loans being the largest financial

At the end of 2017, 44 million Americans collectively owed $1.4 trillion in student loans; most of the balance was accumulated within the last decade.
and high-paying jobs are not guaranteed. In other words, students can spend or borrow a substantial amount of money for an education that might not improve their long-term earnings.

**Repayment and Defaults**

What is the repayment status of these federal student loans, and are they generating revenue for the government? In short, the results are not positive. The CBO estimates that under the fair value approach that considers market risk, which arises because borrowers are more likely to default when the economy is weak and unemployment is higher, the federal student loan program would cost the federal government $211 billion between 2018 and 2028. Among all borrowers, about a third are not making payments because they are still in school, about half are making payments on time or have alternative arrangements, but about 15% to 20% are not making timely payments. The Federal Reserve Bank of New York data for the second quarter of 2018 estimates about 7 million borrowers are at least 90 days delinquent or in default, and these individuals are responsible for a $189 billion loan balance. A separate Federal Reserve Board report shows that beyond just being in default or 90 days delinquent, 20% of borrowers with outstanding balances are behind on their payments. The Federal Reserve Board study also shows that borrowers who did not complete a degree or who attended for-profit institutions are more likely to default or not make timely payments. In 2017, a quarter of the for-profit attendees were behind on their payments, compared with 9% and 6% of graduates of public and private non-profit institutions, respectively. Borrowers who did not complete a degree or who attended for-profit institutions are even more likely to fall behind on payments than those who took out large sums of debt but completed degrees from public or private nonprofit institutions. Minorities and first-generation students are also less likely to make timely payments. A separate study using Department of Education data reached similar conclusions. Specifically, default rates have more to

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**FIGURE 1 — U.S. HOUSEHOLD DEBT COMPOSITION: AUTO LOANS, CREDIT CARD DEBT, AND STUDENT LOANS**

![Graph showing the share of total debt for auto loans, credit card debt, and student loans from 2007 to 2018.](source_url)


**NOTE** The annual data represent simple averages of the quarterly data.
do with the characteristics of students (minorities and students who do not complete their degrees are more likely to default) and the institutions attended (borrowers attending for-profit institutions are more likely to default) than the average level of debt. Furthermore, the demographic groups that have high default risks and high dropout rates generally overlap.

**Growth of Income-Driven Repayment (IDR) Programs**

In addition to the substantial increase in loans, another noticeable trend is the significant growth of enrollment in repayment plans that are linked to eligible students’ future income. In 2011, about 700,000 borrowers enrolled in IDR programs; this number grew to 1.6 million in 2013, 3.3 million in 2015, 5.3 million in 2016, and 6.3 million in 2017. This represents an 800% increase between 2011 and 2017. The CBO estimates that in 2017, 46% of student loan balances are being repaid through IDR programs, up from 28% in 2014.

There are four types of IDR programs: Income Contingent Repayment (ICR), Pay As You Earn Repayment (PAYE), Revised Pay As You Earn Repayment (REPAYE), and Income Based Repayment (IBR). One common feature of IDR programs is that they calculate monthly payments as a share of the borrower’s discretionary income, ranging from 10% to 20% and with a dollar amount cap. In addition, IDR programs forgive the remaining loan balances after a certain number of years, typically between 20 to 25 years. The IRS considers the forgiven balances as taxable income, and borrowers must therefore pay taxes on that amount.

A separate income-driven program, called Public Service Loan Forgiveness (PSLF), was established in 2007. The PSLF allows borrowers who work for a government or not-for-profit organization to receive loan forgiveness after 10 years of repayment. Besides the shorter repayment period to obtain loan forgiveness than other IDR programs, the loan balance cancelled is not considered taxable income. This program’s first wave of beneficiaries had their loans forgiven around October 2017.

Under the PSLF, it does not matter what the borrower does for the employer—it only matters that the employer is a government or not-for-profit organization. In other words, if an individual works at any level of a government organization, any non-for-profit organization that is tax exempt under Section 501(c)(3) of the Internal Revenue Code, or any organization whose primary purpose is providing qualifying public services, these organizations would constitute qualified employers. A CBO report estimated that in 2016, the tax cost of PSLF income exclusion was $200 million, which mostly went to higher income taxpayers. The report explains that this is because the terms of PSLF eligibility for tax-exempt forgiveness ensure the benefits go to people who are employed and have at least 10 years of experience, which usually correlates with higher income.

The IDR and PSLF programs essentially provide insurance to students so they are more willing to make the “risky investment” of college education. However, the costs do eventually transfer to all taxpayers. Contrary to non-income-based programs, the IDR and PSLF plans cost the federal government more money than the borrowers repay, with the loan forgiveness at the end of the repayment term as the primary loss driver.

The natural consequence of more borrowers using the IDR and PSLF plans is that the federal government and taxpayers are lending more money than is being repaid. The uncertain timing of cash flow and the rapidly growing enrollment in income-based programs also create problems for the government from a portfolio management perspective. The CBO points to two groups of borrowers that make these programs especially costly: high- and low-income borrowers with large loan balances. Although these programs are typically not attractive to borrowers with high incomes, the loan cancellation feature may create incentives for high-income borrowers with very large loan balances to participate. In addition, if this program disproportionately attracts borrowers with high debt and low income, it will also make the program more costly.
Besides the cost to taxpayers, the PSLF program is criticized for being overly generous. Although public service advocates touted the high utilization as evidence of the program’s success, opponents believe this well-intended policy is being abused. A Government Accountability Office study states that about 25% of the U.S. workforce is employed by public service organizations that meet the PSLF requirements. It is also hard to estimate PSLF enrollment because borrowers can finish the public service requirement first and then retroactively claim the loan cancellation benefits as far back as 2007, when the program first started. In part to better estimate enrollment, the Department of Education established an employment certification program to verify employer qualifications, and the department encourages borrowers to send in their documents for approval. However, the department attempted to withdraw the eligibility of thousands of already approved borrowers retroactively in late 2016, creating a wave of lawsuits. Several studies have suggested repealing PSLF and consolidating it with existing IDR programs or narrowing the qualified public services as solutions to these problems.

RECENT DEVELOPMENTS AND REFORM PROPOSALS

There is no shortage of proposals to change the current federal student loan program. The Trump administration proposed an overhaul of the IDR system in the FY 2019 budget. The administration’s plan calls for the consolidation of the various repayment plans into one that has different repayment terms (15 years for undergraduate students and 30 years for graduate students for loan forgiveness), while capping monthly payments at 12.5% of discretionary income. In addition, the PSLF will be eliminated.

In recent years, Congress has also taken different approaches to improving the system: in 2016, several representatives introduced the “Relief for Underwater Student Borrowers Act” (H.R. 5617) and “Student Loan Tax Debt Relief Act” (H.R. 2429), which would essentially exclude discharged student loan debt from taxed income such that borrowers would not have to pay taxes on these forgiven loans. Neither of these proposals have advanced since their introduction in Congress.

On the other hand, the PROSPER Act (H.R. 4508, also known as the House Republican plan) proposed ending loan forgiveness and implementing a cap on total payments. This 542-page proposal called for a standard 10-year repayment plan and one income-based plan, discontinuing the PSLF program for new borrowers, and emphasized empowering families and students to make informed decisions about student loans. This plan did not advance, but a portion of it became the “Empowering Students Through Enhanced Financial Counseling Act” (H.R. 1635), which passed the House in early September 2018. This bill replaced the one-time entrance counseling with annual counseling for federal student loan borrowers, and it expanded the required counseling participants to include Pell Grant recipients and parent borrowers.

A CBO study comprehensively summarized over 10 potential approaches to reforming the federal student aid program. The study notes that the proposals each have different impacts on enrollment, completion rates, and student financial risks because they target different aspects of the aid process. Policymakers therefore need to agree on what goals to accomplish before deciding which reform proposal is desirable. For example, income share agreements, in which an entity (could be a private business or a university itself) invests in a student’s school-related expenses in return for a fixed share of the student’s subsequent earnings, are likely to enhance enrollment and completion rates, and reduce students’ financial risk. Increasing the limits to the amount students can borrow is likely to have modest effects on enrollment and increase completion rates and students’ financial risk.

The Tax Cuts and Jobs Act (TCJA) of 2017 also made an important change to the tax considerations for cancelled student loan balances. Prior to the TCJA, if a borrower died or became permanently disabled, the Department of Education would forgive the student loan but the family was required to
THE RETURN ON INVESTMENT OF A COLLEGE EDUCATION

With the amount of student loan debt accumulated, it is natural to think there is not enough federal aid for postsecondary education. However, a CBO study concludes that there is no consensus on whether the current federal financial aid programs, including the amount of money devoted to student loans, provide too much or too little financial support for students. This seemingly counterintuitive result comes from students’ potential overinvestment in their human capital. From the students’ perspectives, the current system may over-incentivize and encourage them to obtain more education than they need, therefore allowing them to accrue too much debt. For schools, pouring more money into the federal financial aid system may induce some schools to enroll unprepared students who qualify for federal grants, eventually resulting in the waste of taxpayer money.

A related issue to making investment decisions is what returns does a college education generate. Higher education provides benefits not only to students but also to society. From the government’s standpoint, students’ higher earnings lead to increased tax revenue and reduced dependence on public welfare. Some also believe that encouraging uncertain college attendees, who are disproportionally at risk for social problems such as health, teen pregnancy, and crime, to attend college is likely to generate a range of social benefits that go beyond increased earnings and employment.

The extensive economics literature examines the returns of a college education from a labor market perspective. Several studies found that four-year public and nonprofit private colleges generated earnings that average about 10% to 15% higher per year of education. Returns are slightly lower but generally similar for community college associate degree programs, ranging from 7% to 15% per year of schooling, and associate degrees typically require two years of study. Returns on for-profit education are less homogenous, with returns ranging

PUBLIC SERVICE LOAN FORGIVENESS (PSLF) allows borrowers who work for a government or not-for-profit organization to receive loan forgiveness after 10 years of repayment. Both the IDR and PSLF plans cost the federal government more money than the borrowers repay.
from negative to positive: some found earning gains of 4% per year of education depending on employment,\textsuperscript{39} while others reported 8% to 11\% less earnings compared with students from other types of institutions.\textsuperscript{40} Other studies also found considerable variation in returns across different fields of study, ranging from negative, indifferent, to positive.\textsuperscript{41}

Historically, college education has been viewed as an opportunity equalizer. Over the last decade, an increasing number of children from low-income families attended college, with the majority of these students attending two-year colleges and for-profit institutions. The share of students from low-income families in selective private and four-year public universities has not increased as significantly.\textsuperscript{42} Due to the slightly lower returns for associate degrees and the inconsistent returns of for-profit colleges, whose attendees are primarily from low-income and minority families, some have argued that college is not an effective equalizer for minorities because the large student loan balances hinder financial success and long-term wealth building.\textsuperscript{43}

However, other researchers have shown that colleges still function as facilitators of knowledge and provide great intergenerational mobility, and various institutions promote mobility differently. Contrary to general perceptions, flagship public universities and elite private universities are not leaders in promoting upward mobility, defined as moving a student from the bottom 20\% to the top 20\% of income distribution. Instead, mid-tier public institutions, such as the City University of New York (CUNY) system, certain California State University colleges, and some University of Texas campuses, are best at promoting mobility across generations. However, if a low-to-middle income family wants their offspring to reach the top 1\% of the earnings distribution instead of top 20\%, elite private universities are best, followed by highly selective public institutions.\textsuperscript{44}

Still other researchers think that a college education still provides great returns and value, but in a different manner. With the decline of traditional middle class jobs, pairing technical skills with interpersonal skills should be the new purpose of college education. College students need to be prepared to join the artisan economy,\textsuperscript{45} in which successful workers combine their own personal style with routine tasks to create higher value-added and customization, or complement new technologies with personal touches to create better experiences for customers. The artisan economy differs from the repetitive technical jobs that can easily be replaced by artificial intelligence and automation.

\textbf{CAVEAT EMPTOR: BUYERS BEWARE}

We do not need more regulations to make the existing federal student loan programs more complicated. Instead, the effort should focus on simplifying and consolidating existing programs. Overly generous programs such as the PSLF need to be tightened to avoid disproportionally benefiting higher income groups. Furthermore, students and their families are more likely to make good decisions if they are better informed about the costs and benefits of college education, including options for financial aid, employment prospects, risks, potential debts, and repayment responsibilities.

From the government’s perspective, because borrowers with certain characteristics may have higher risks of default, there may be a need for policies that focus on addressing obstacles these borrowers encounter or difficulties that prevent them from making informed decisions. These policies will lead to positive outcomes in terms of increased government revenue, manageable amounts of loans, and ideal levels of students’ education investment.

\textbf{ENDNOTES}


\textbf{Families are more likely to make good decisions if they are better informed about the costs and benefits of college education, and reform efforts should focus on simplifying and consolidating existing programs.}
2. Student loans include loans to finance educational expenses provided by banks, credit unions, and other financial institutions as well as federal and state governments. See Federal Reserve Bank of New York, Data Dictionary, https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/data_dictionary_HHDC.pdf.


7. Congressional Budget Office, Federal Aid for Postsecondary Students.

8. The fair value approach, required by the budget resolution of 2018, estimates budgetary effects based on how the private market would value loans. This approach incorporates the cost of market risk for the government when issuing student loans, which is in contrast to another approach prescribed by the Federal Credit Reform Act of 1990, where the cost of loans is estimated by discounting the expected cash flows at Treasury rates without explicitly considering the market risk.

9. Congressional Budget Office, Federal Aid for Postsecondary Students.


15. Congressional Budget Office, Federal Aid for Postsecondary Students.

16. IBR was established in 73 FR 63222 (Oct. 23, 2008), and PAYE was proposed in 77 FR 42086 (July 17, 2012) and finalized in 77 FR 66088 (Nov. 1, 2012). REPAYE was proposed in 80 FR 39608 (July 9, 2015) and finalized in 80 FR 67204 (Oct. 30, 2015). The plans generally differ in terms of borrowers’ qualifications, monthly repayment amounts, length of repayment periods, and the types of loans qualified under the plans.

17. Due to the recency of this cancellation, statistics for these PSLF borrowers with loans forgiven are not yet available, but they will be available in the near future.

19. Section 501(c)(3) organizations must be organized and operated exclusively for “exempt purposes,” which are charitable, religious, educational, scientific, literary, testing for public safety, fostering national or international amateur sports competition, and preventing cruelty to children or animals. See the IRS website: https://www.irs.gov/charities-non-profits/charitable-organizations/exempt-purposes-internal-revenue-code-section-501c3.


22. If the borrower repays the minimum amount required, the principal remains and unpaid interest accrues faster than when the borrower makes larger payments, which high-income borrowers can usually do.


31. Congressional Budget Office, Federal Aid for Postsecondary Students.


36. Some research has documented a causal link between college education to reduced crime, health, disability payments, and teenage birth. See (1) Michael Hout, “Social and Economic Returns to College in the U.S.,” Annual Review of Sociology 38 (2011): 379-400; (2) Philip Oreopolous and


44. Chetty et al., “Mobility Report Cards.”


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