
A POLICYMAKER'S GUIDE TO Using New Student Debt Metrics to Strengthen Higher Education Accountability



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EXECUTIVE SUMMARY

College remains an essential path to economic security and a better life. Yet, tens of millions of college graduates need student loans to pay for college, and for a generation of students, borrowing for college has become the norm.

Loans help students enroll and persist in college and student debt pays off over time for most students who complete a quality credential, especially for those who complete a at a public or non-profit college. But, high default and delinquency rates, escalating loan balances for those who rely on income-drive repayment (IDR) as a safety net to make payments more manageable, and potentially long-term impact on careers and financial security underscore that for some students, federal debt doesn't pay off at all, and for still others, the payoff is much less than the norm. Moreover, the burdens of student debt fall most heavily on low-income students and underrepresented students of color, reinforcing long-time educational and economic inequities.

The Need to Strengthen Protections for Students Who Borrow to Attend College

Although colleges cannot guarantee success, too many of them routinely and disproportionately enroll students who ultimately experience adverse debt outcomes. Better identifying these colleges is key to effectively addressing the student debt crisis, including its inequitable impacts.

Accountability rules like Cohort Default Rates (CDR) and the recently repealed Gainful Employment (GE) rule define minimum standards to identify those colleges or programs that routinely leave students worse off. Not only do these rules protect students from the worst-performing colleges, but evidence suggests both that many colleges improve the value they offer students in response to these standards and that, among colleges that do not improve, students have access to better options at alternate programs and colleges. Now, however, policymakers need new ways to hold colleges accountable to complement CDR.

Consequences of the COVID-19 pandemic add even more urgency to strengthen college accountability and meaningfully protect millions of students from severe, long-term struggles with student debt. To support borrowers during the COVID-19 pandemic, the federal government has provided historic student loan repayment relief that temporarily suspends payments on most federal student loans. This relief has provided vital help for borrowers with eligible loans. However, at least four-years of CDRs will be impacted by the payment pauses, and some colleges with bad outcomes, that would otherwise have high CDRS, may avoid sanctions. Surging enrollment at online programs may also lead to lower quality offerings and worsening loan outcomes, once temporary relief is lifted.

Three Debt Metrics that Could Move the Needle on Borrower Success

Debt metrics can be used to measure several different outcomes that indicate student and borrower success. These outcomes roughly fall into four categories, each of which points to ways students struggle to repay their debt, and ways colleges can change the likelihood that they struggle: successful degree completion, ability to use college's credentials to obtain a well-paying job, adequate progress on loan repayment, and manageability of student debt.

This paper explores three debt metrics that could strengthen the existing accountability system: **debt-to-discretionary earnings ratios, earnings net of expected debt payments thresholds, and repayment rates**. Each should be considered for use alongside the existing CDR. These metrics seek to set a minimum standard where students are left better off after borrowing to

attend college, are supported by a range of experts in the field, and are operationally viable. However, each has its strengths and weaknesses.

For each metric, the paper uses existing data and research to analyze its strengths and weaknesses, including whether using the metric alongside CDRs, to help determine institutional access to Federal Student Aid, could credibly be expected to lead to changes in college behavior and improve borrower outcomes. We also discuss thresholds that policymakers could consider setting as minimum standards for each metric.

SUMMARY OF DEBT METRICS		
Metric	Definition used for this report	Example thresholds
Debt-to-discretionary earnings	Ratio of the median annual loan payments among students who graduated, compared to those same former students' average discretionary annual income. Discretionary income is the higher of the mean or median annual earnings less than 150% of the Federal Poverty Line for a one-person family.	20 percent (pass GE) 30 percent (fail GE)
Earnings net of debt payments	How much money will remain from students' earnings after they make their expected student loan payments.	\$19,140 (150% of the Federal Poverty Line for one-person family) \$28,000 (typical earnings of high school graduate) \$35,000 (CEW Georgetown definition of a "good job")
Repayment rate*	Percentage of all borrowers whose loan balances decreased by at least \$1 among all borrowers who entered repayment, including non-completers.	15 percent (Hatch/Shahen proposal) 35 percent (2011 GE rule) 45 percent (PROSPER Act) 50 percent (considered for GE rule)

* This paper also discusses alternative variations, such as "dollar-based" and "cohort-based" repayment rates.

Challenges in Developing and Using Debt Metrics for Accountability

Although debt metrics are critical to strengthening protections for student-borrowers and taxpayers, policymakers must make difficult decisions in developing and fitting debt metrics together to trigger accountability sanctions. To name just a few challenges, metrics should ideally lead to responses from colleges that improve student outcomes and affordability, adequately mitigate disproportionate impacts on low-income students and underrepresented students of color, measure financial health for all borrowers and loan types (including non-completers and private loans), and reliably signal performance in both good and bad economic times. On top of that, policymakers must grapple with how quickly metrics can measure borrowers' financial health after students leave college, how well metrics cover most colleges and programs after statistical exclusions, and how metrics interact with student loan repayment options—including IDR.

Most crucially, policymakers must develop metrics and accountability systems that are not overly influenced by racial and economic disparities outside the control of colleges. Low-income students and students of color have the most to gain from federal accountability policies that guard against colleges that consistently produce poor outcomes, and at the same time, maintain access to high-quality options. Still, they also have the most to lose from poorly designed accountability systems that could adversely impact equitable college access.

Gaps and inconsistencies in publicly available data also make it hard to precisely model the impacts of the three metrics explored in this report, or to definitively recommend a single metric or threshold. Data are critical to understanding the benefits and harm reduction associated with debt metrics, along with impacts on students that historically have had less access to higher education. Currently, repayment rate is the only metric in this paper that has publicly available data for the full universe of colleges participating in federal student aid. Debt-to-discretionary earnings and earnings net of debt payments have data available from GE, but those data do not cover many programs at public and nonprofit four-year colleges, and they are relatively outdated. Still, we believe that examining tangible—though imperfect—information on debt, earnings, and loan repayment can help set a path forward for policymakers interested in developing metrics and thresholds.

Findings

This paper finds earnings net of debt payments to be the most promising option for policymakers to use in conjunction with CDR to determine federal aid access and college accountability and oversight. This metric is more likely to result in colleges focusing on strategies to improve completion and credential quality, while it is less influenced by racial disparities and macroeconomic factors external to colleges. This metric is also well-suited for assessing outcomes of all borrowers because it can include private loans and sets a minimum earnings floor that represents a basic income, that even students with little debt should make after college.

Despite their popularity, repayment rates are likely better indicators of strong performance on loan outcomes, rather than barometers of whether colleges fail to meet a minimum bar. Higher repayment rates may help to signal that most borrowers are keeping up with student loan payments, but these rates are also influenced, more than other metrics, by factors external to colleges—such as racial disparities in debt burdens and wealth and interactions between IDR, family size, and interest rates. However, repayment rates may still add value in combination with other metrics within an accountability system.

Debt-to-discretionary earnings falls somewhere in between earnings net of debt payments and repayment. This metric may lead colleges to make efforts to improve credential quality, as well as make their offerings more affordable, so that students leave with less debt. That said, this metric may be a less reliable indicator of borrower health for students who do not graduate and have relatively little debt.

Recommendations

Based on our analysis and findings, we recommend that policymakers develop and implement new metrics to supplement the use of CDR to determine institutional (or programmatic) eligibility for federal aid to improve student debt outcomes. Specifically, we recommend that policymakers:

- **Hold colleges accountable for borrowers' earnings after expected debt payments.** Students enroll in college for many reasons, and not all programs are intended to confer economic returns. However, if a program is financed with student loans, it should at least leave most borrowers with a minimum level of economic security.
- **Set an earnings threshold that measures a minimum level of economic success.** The threshold on earnings net of debt payments could be set at 150 percent of the Federal Poverty Line (\$19,140 for a single individual in 2020) or the typical earnings of a young worker with a high school diploma. Thresholds could be set on a national average of high school earnings (\$28,000) or in the college's state averages. A multiple of the Federal Poverty Line would test whether a borrower makes enough after college to make expected student debt payments, without eating into personal living necessities. Alternatively, borrowers making less than a typical high school graduate (with no college degree or certificate) would be likely worse off than if they had not attended college.
- **Consider establishing an alternative eligibility measure for federal student aid, such as repayment rate.** Earnings net of debt payments pairs well with repayment rate. The repayment rate would provide an initial filter that would allow institutions, that have strong loan payment outcomes, to pass the accountability standard, without any adverse sanctions. Earnings net of debt payments would set a minimum standard for colleges that do not pass the repayment rate threshold. These metrics work well together since they both can evaluate the same set of borrowers, respectively, including both completers and non-completers. Fifty percent or 35 percent may be good thresholds for a borrower-based repayment rate to identify colleges with adequate outcomes, that they do not need an assessment on earnings net of debt payments.¹ Colleges would need to pass CDR and existing eligibility standards as well.
- **Ensure earnings data are verified.** Colleges have an opportunity to verify the calculations of CDR, but privacy laws forbid the same process from being used to verify earnings. One federal court has ruled that using tax data to measure earnings did not consider the fact that some colleges produce graduates who are disproportionately likely to understate their income on their tax returns. Policymakers need to use the most accurate and comprehensive earnings data possible and develop an earnings appeals process that allows for reasonable due process, but also ensures institutions cannot game earnings measures by submitting inflated and inaccurate income data for their students, particularly if the accountability framework does not include an alternative mechanism, like a repayment rate.

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- **Consider using both institution-level and program-level metrics.** Program-level metrics may help differentiate outcomes within colleges and avoid all or nothing accountability. However, they may raise n-size concerns. Policymakers should consider grouping similar programs or calculating metrics that combine programs in the same credential level. COVID-19 has also led to a surge in online course-taking, and policymakers should consider ways to separate exclusively online and hybrid programs from other programs in the same college.
 - **Take changes in economic conditions into account.** Debt metrics should fairly assess college performance during both good and bad economic times. Economic conditions can influence all three debt metrics, and they are particularly important for debt-to-discretionary earnings and repayment rate because of sensitivity to changes in debt amounts and interest rates on top of changes in post-enrollment earnings. Rolling averages can help, and their use is well-established from GE rulemaking. Adjustments to metric rates, or thresholds, based on changing macroeconomic conditions and interest rates are another option. For instance, earnings net of debt payments thresholds could be adjusted based on typical earnings in states or regions that colleges serve.
 - **Assess metrics over the shortest time period possible to allow for valid measurement of performance.** Policymakers need to ensure that measurement occurs far enough into repayment that results are stable and reflect current and likely longer-term risk, but also soon enough that performance is reasonably attributed to the actions of colleges or programs. This is especially difficult to achieve for repayment rate because it, on average, increases steadily over time and short-term rates may be less reliable for borrowers enrolled in IDR. All debt metrics should be calculated on exit cohorts, not initial enrollment. The universe of institutions can change too quickly over time for metrics based on initial enrollment to effectively guard against poor outcomes at newly formed or reorganized colleges (or programs). Policymakers should also consider measuring earnings net of debt payments and repayment rate about five years after leaving college. In contrast, a shorter measurement window may be sufficient for a debt-to-discretionary earnings metric.
 - **Improve access to aggregate and student-level data.** Resolve issues with sharing data across government agencies to more effectively develop and implement metrics and thresholds. Better data can help to highlight the benefits and harm reduction associated with debt metrics and mitigate unintended consequences. The U.S. Department of Education should collect necessary data, calculate metrics, and analyze their effects, before tying them to consequences. Data should allow for the disaggregation of debt metric outcomes by program, including ways to separate exclusively online and hybrid programs. Congress should require the federal government to collect private student loan data directly from lenders to ensure a complete record of student debt. Congress should also clarify that federal agencies, with earnings data, have the authority to share those data and that evaluation of colleges and programs is a legitimate use of those data.

INTRODUCTION

For a generation of students borrowing for college has become the norm. Today, most students must borrow to complete a degree, and the amount they borrow has more than doubled in 15 years.² For many, borrowing continues to pay off over time, especially for those who complete a bachelor's degree at a public or non-profit college. But far too many Americans—more than a million students who default on their student loans each year, and the over 1 in 4 borrowers who eventually default on their loans— end up worse off financially, than had they never enrolled at all.³

Contrary to the popular narrative, those struggling the most with the burden of student debt are not the students borrowing the highest amounts to attend expensive private colleges or attain graduate and professional degrees. Students who do not complete their programs, or who completed low-quality credentials that employers do not value, face the worst outcomes, even with relatively small amounts of debt. Additionally, systemic racism and its resulting wealth gaps hit Black borrowers especially hard: Black students are more likely to borrow, borrow more, and half of Black borrowers who first entered college in 2003-04 defaulted on their student loans within 12 years.⁴

While colleges cannot guarantee success, too many of them routinely and disproportionately enroll students who ultimately experience adverse debt outcomes. Better identifying these colleges is key for policymakers to effectively address the student debt crisis, including its inequitable impacts. Experience shows that holding colleges accountable can improve loan outcomes, as the Cohort Default Rate and Gainful Employment (GE) rule have done.

This paper considers three approaches to more clearly defining and measuring how often colleges leave students they enroll “worse off” financially: debt-to-discretionary earnings ratios, earnings net of debt payments thresholds, and loan repayment rates. From among many alternatives, these three metrics stand out because they conceptually fit best with measuring whether colleges make students “worse off,” a range of experts in the field support their use, and they meet the tests of operational viability. The paper also explores how policymakers could use one or more of these “metrics” to hold colleges more accountable for meeting minimum standards to prevent high concentrations of bad loan outcomes among their students.⁵ The paper focuses on metrics that can be used to manage high-stakes consequences for colleges (or programs offered by colleges) more effectively, such as the loss of access to federal student grant aid and loans (Title IV eligibility). For each metric, the paper uses existing data and research, as well as example borrower modeling, to analyze its strengths and weaknesses, including whether the metric could credibly be expected to lead to changes in institutional behavior and improve borrower outcomes if policymakers used it alongside the existing Cohort Default Rate (CDR) to determine federal aid eligibility or trigger other sanctions. We also discuss promising thresholds that policymakers could consider setting minimum standards for each metric.

Ultimately, we recommend policymakers prioritize developing an earnings based metric to supplement CDR, building an accountability framework around earnings net of debt payments, finding the best way to share earnings data between agencies to produce the metric, and improving the availability of comprehensive data on student debt and success. Policymakers should also consider ways to pair repayment rates with earnings-based metrics, mitigate the impact of economic fluctuations on the metrics during recessions, and whether to apply metrics to entire colleges, programs, or both—a decision that has critical tradeoffs. Finally, the measurement window of each metric should be the shortest possible time that provides validity and allows for a clear signal of performance, roughly three to five years.

BACKGROUND

Research suggests that loans help students enroll and persist in college, and that student debt pays off over time for most students who complete a quality credential. Some students may even under-borrow to the detriment of completion.⁶ However, high default and delinquency rates, escalating loan balances for those who rely on income-drive repayment (IDR) as a safety net to make payments more manageable, and potentially long-term impact on careers and financial security underscore that for some students, federal debt does not pay off at all. For still others, the payoff is much less than the norm.

College completion and student debt outcomes are correlated to a troubling degree with students' economic background and race.⁷ Low-income students and students of color have the most to gain from well-designed accountability systems that protect them from poor outcomes while maintaining access to high-quality options. Still, they also have the most to lose from poorly designed accountability systems that could adversely impact equitable college access. Poorly designed systems could be overly influenced by factors outside of colleges' control, such as racial wealth gaps and disparities in institutional resources.⁸

There is bipartisan interest in setting new minimum standards for student loan outcomes.⁹ The success of implementing Cohort Default Rate (CDR) in the 1990s and the gainful employment rule in the 2010s, both described below, demonstrate the possibility for policymakers to design and implement safeguards for students effectively.¹⁰

Gainful Employment

The Gainful Employment (GE) rule worked to ensure that career-education programs leave their graduates with affordable debt relative to their actual incomes. It distinguishes between programs that provide affordable training that leads to well-paying jobs and those that do not, based on the debt-to-income ratios of their graduates.¹¹ The mere threat of sanctions under the rule prompted many colleges to eliminate their worst performing programs, freeze tuition, and implement other reforms to improve outcomes for their graduates.

Unfortunately, the GE rule was rescinded by the Department of Education under the Trump administration. Hopefully, it will be reinstated by the Biden administration because it successfully identified certain higher education programs that graduated students with unaffordable debt relative to post-enrollment earnings.

Under GE, any program where typical graduates' debt exceed both 8 percent of their total income and 20 percent of discretionary income were required to improve, or lose access to federal financial aid. Programs would only lose eligibility if they failed the rule's measures for two or three years, depending on how poorly they performed.¹²

The GE rule worked. Since its first inception in 2010, the costs of career programs have gone down, scholarship aid has increased, and some colleges now offer free trial periods. Some students also opted for more affordable options with better outcomes when GE led to the closure of some programs likely to fail GE.¹³ Even industry representatives have acknowledged that the GE rule forced for-profit colleges to reduce the cost of programs and offer students greater value.¹⁴

Cohort Default Rate

The CDR metric, established in the 1980s, highlights colleges that were preying on low-income students who may have trouble repaying their loans.¹⁵ Today, CDR remains an effective tool, measuring the share of federal student loan borrowers at every college who default on their federal loans within a specific time after entering repayment. Colleges with CDRs of 30 percent or higher for three consecutive years or more than 40 percent in any year can be sanctioned and lose eligibility to participate in federal student aid programs.¹⁶

Holding colleges accountable for unacceptably high default rates through CDR has successfully driven down student loan defaults, but the measure needs strengthening. Evasion of CDR accountability through abuse of forbearance options – which temporarily suspend payments but may serve to delay rather than prevent defaults – harms borrowers and undermines the meaningfulness of the CDR metric.¹⁷ Moreover, roughly half of borrowers who ultimately default do so after the CDR's three-year measurement period and do not count as an adverse outcome for the metric.¹⁸

Additionally, CDRs may go down when a college's borrowers enroll in IDR plans, which set monthly payments based on the borrower's income and family size.¹⁹ With payments as low as zero dollars, IDR plans effectively lower the odds that struggling borrowers will default, but lower defaults do not represent the quality or payoff of the education they received from a particular school. Increased participation in IDR is another reason policymakers should consider adopting additional debt metrics to complement CDR. IDR is an important safety net for borrowers left with unaffordable debt, and metrics should not reward colleges for reducing IDR enrollment. Yet, IDR should not be a haven for schools that leave students with unaffordable debt.

Consequences of the COVID-19 pandemic add even more urgency to developing additional metrics that strengthen college accountability and meaningfully protect millions of students from severe, long-term struggles with student debt. To support borrowers during the COVID-19 pandemic, the federal government has provided historic student loan repayment relief that temporarily suspends payments on most federal student loans. This relief has provided vital economic help for borrowers with eligible loans, who can better cover their basic needs during the current crisis without having to worry about their balances ballooning from unpaid interest, or their loans falling into delinquency or default. However, at least four-years of CDRs will be impacted by the payment pauses, and some colleges with bad outcomes that would otherwise have high CDRS may avoid sanctions.²⁰ Surging enrollment at online programs may also lead to lower quality offerings and worsening loan outcomes, once temporary relief is lifted.²¹ Policymakers must not lose sight of the continuing need to ensure colleges are held accountable for consistently unacceptable student outcomes.

WHAT DOES BORROWER SUCCESS LOOK LIKE?

While CDRs measure the very worst outcome for a student loan borrower, default, the rescinding of the GE rule eliminated the only measure, implemented to date, aimed at assessing whether certain borrowers' educations were paying off. Whether all student borrowers can repay their loans has become a critical federal policy issue. There is broad dissatisfaction among policymakers, and much of the higher education community, with the poor debt outcomes for too many students and how colleges are evaluated and held accountable based on their former students' ability to manage their debt.

Debt metrics can be used to measure several different outcomes that indicate student and borrower success. These outcomes roughly fall into four categories: successful degree completion, ability to use college's credentials to obtain a well-paying job, adequate progress on loan repayment, and manageability of student debt.

- **Successful Degree Completion:** The evidence is clear that one of the main drivers of student loan repayment is successful degree completion.²² Students who complete a degree or certificate are 20 percentage points more likely to begin paying down their loan principal than non-completers each year after leaving campus.²³ Research shows that borrowers who drop out with debt and no degree are three times more likely than graduates to default on their loans.²⁴

Completion is also a critical factor in how much students make after college and what resources they will have to pay for basic personal needs, as well as student loan payments. Young adults with only a high school diploma are almost three times as likely to be unemployed, and those who are employed earn three-fifths as much as those with at least a bachelor's degree.²⁵ Research on returns from a college education shows that students typically make more after graduating from college than they would have earned without a college degree.²⁶

- **Ability to Use College Credential to Obtain a Job:** While there are many benefits to higher education, not all of them easily measured, most students report that the primary reason they enroll in or return to college is to obtain meaningful employment.²⁷ Lower unemployment and higher earnings among college graduates show college is usually worth it. However, too many programs routinely fail to fulfill their promise to deliver on that fundamental goal.²⁸

Most notoriously, some for-profit programs fail dramatically in preparing students for the workplace. These students are confronted with recruitment tactics promising a wealth of job opportunities that never transpire. As a result, students—especially underrepresented students of color—are saddled with debt they cannot repay and a degree they cannot use.²⁹ More broadly, many colleges struggle to help their graduates find jobs and economic security consistently. Students in roughly 1 in 5 certificate programs make less than a typical high school graduate one year after graduation.³⁰ It is also not uncommon for associate's and bachelor's degree graduates to earn considerably less than from more affordable programs that would leave students with less debt.³¹

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- **Ability to Manage Student Debt Payments:** The definition of what constitutes a manageable student debt load is variable. One working definition posits that borrowers may consider their debt load manageable if they can “maintain a standard of living not dramatically different from others with similar incomes and qualifications,” and it is not until repayments start to chip away at “some amount of consumption or savings” that debt becomes a burden.³² This concept created the rationale for the debt-to-discretionary earnings metrics for GE (see page 14).

A starker definition would be to consider debt manageable if a borrower can make monthly payments and remain out of delinquency and default. However, borrowers that make loan payments may still face adverse impacts from too little income and crushing debt. IDR plans can help make payments more affordable, basing payments on as little as 10 percent of “discretionary” income (defined as how much the borrower’s income exceeds the Federal Poverty Line at their family size).³³ Yet, IDR should not be a haven for colleges when debt is unaffordable. Policymakers considering the manageability of debt payments need a concrete definition of how much debt is too much, what loan payment outcomes may indicate manageable debt, and how existing repayment plans affect both of those things.

- **Adequate Progress on Loan Repayment:** Progress on loan repayment is different from the other three categories because it captures borrowers’ progress towards paying loans in full, rather than how well colleges position students to have financial resources to be able to pay their loans. Whether a borrower is in negative amortization (their balance is growing due to interest, rather than shrinking) or the rate at which they are paying down their debt, are markers of repayment progress.

Repayment rates are widely seen as promising, but can be controversial, if used for college accountability because colleges do not necessarily exercise lasting control over repayment behavior, and loan repayment can be influenced by broader societal trends and disparities.³⁴ Yet, there are some actions colleges could take to improve repayment rates, such as improving loan counseling, on top of other efforts to improve completion, credential value, and manageability of debt.

Each of these categories – successful degree completion, ability to use a college credential to obtain a job, ability to manage student debt payments, and adequate progress on loan repayment – points to the many ways students struggle on repaying their debt, how colleges can change what they are doing to move the dial on student loan outcomes, and how policymakers can identify bad actors.

DEBT METRICS

CDR remains essential for knowing the share of borrowers who experience the absolute worst borrowing outcome. CDR provides a discrete, comparable measure of the default risk a school poses to its student loan borrowers. To strengthen accountability, debt metrics proposed in this paper will need to credibly complement and build off CDR.³⁵

Three Debt Metrics That Could Move the Needle on Borrower Success

The below table summarizes our review of how policymakers and experts have thought about and used the three debt metrics we have identified as the most promising to improve borrower success. From among many alternatives, these three metrics stand out because they conceptually fit best with measuring whether colleges make students “worse off,” a range of experts in the field support their use, and they meet the tests of operational viability. We will examine whether each of these metrics could credibly be expected to lead to changes in institutional behavior and affect borrower outcomes (see page 26), as well as how policymakers could consider fitting these metrics together (see pages 56).

- **Debt-to-discretionary earnings:** Ratio of the median annual loan payments among students who graduated, compared to those same former students’ average discretionary annual income. Colleges or programs with ratios that exceed a threshold could face sanctions.
- **Earnings net of debt payments:** How much money will remain from graduates’ earnings after they make their student loan payments. Earnings net of expected debt payments below a minimum threshold could trigger consequences.
- **Repayment rate:** Percentage of all borrowers whose loan balances decrease over a period of time (borrower-based) or a share of dollars on student loans being repaid over time (dollar-based). Repayment below a set threshold could lead to sanctions.

TABLE 1

DEBT METRICS BY BORROWER SUCCESS OUTCOMES				
Metric	Successful degree completion	Ability to use a credential to obtain a job	Ability to manage student debt payments	Adequate progress on loan repayment
Debt-to-discretionary earnings	Less applicable because non-completers are excluded.	Colleges respond by improving credential quality so that typical graduates find higher earning employment	Colleges respond by decreasing debt burdens relative to earnings so that payments eat less into borrower income	Less applicable because rates are not based on actual payment trajectories of borrowers
Earnings net of debt payments	Colleges respond to improve completion to boost borrowers' earnings; sets a floor for earnings that students with little debt, including non-completers, should be able to make	Colleges respond by improving credential quality so that typical graduates find higher earning employment	Colleges respond by decreasing debt so borrowers have more earnings left over after making payments on their student loans	Less applicable because rates are not based on actual payment trajectories of borrowers
Repayment rate	Colleges respond to improve completion to boost borrowers' earnings and prospects of making loan payments	Colleges respond by improving credential quality so that typical graduates find higher earning employment that improves the prospects of making loan payments	Colleges respond by decreasing debt so borrowers can more easily make payments and reduce their balances	Colleges change academic and financial aid practices to position borrowers to be better able to keep up with loan payments

METRIC DEFINITIONS

These three metrics present different methodological variations and possible definitions—a few key ones are summarized here. Unless otherwise noted, discussion of debt-to-discretionary earnings ratios will refer to the metric defined in the 2014 GE rule, earnings net of debt payments will refer to the debt payments subtracted from annual earnings, with both numbers calculated as defined in the GE rule, and repayment rate will refer to borrower-based repayment, as calculated for College Scorecard. The first two definitions are good starting points for policymakers, based on debt and earnings measures that have been developed and vetted through the previous rulemaking. Borrower-based repayment rate is used in this paper due to it being the only repayment metric that has college- or program-level data available for analysis (see box on pages 38-39).³⁶ However, other definitions of repayment rate, such as a dollar-, volume-, portfolio-, or cohort-based, have merit and deserve consideration.³⁷

More detailed methodological decisions for each metric are discussed throughout this report, and we acknowledge when these decisions, such as borrower-based vs. dollar-based loan repayment rates, likely affect conclusions about each metric's strengths and weaknesses. We considered, and decided not to include a number of other metrics (see Appendix I).

Debt-to-Discretionary Earnings

Rationale. Developed and implemented as part of the GE rule, this metric compares the debt of a college's former students to their discretionary income (income after subtracting the portion necessary for basic living needs). If such a ratio is too high, debt payments will leave too little remaining for necessities and will likely eat into consumption and savings.³⁸ Annual debt-to-earnings—the other GE metric—is useful for gauging whether the debt is relatively small compared to gross earnings, but less directly measures the wellbeing of students after attending college because it does not compare earnings to a minimum standard of living. While the GE regulation paired the debt-to-discretionary earnings ratio with an annual debt-to-earnings ratio, this paper focuses on the discretionary earnings metric because it better measures whether colleges make students with debt economically worse off.³⁹

TABLE 2

DEBT-TO-DISCRETIONARY EARNINGS DEFINITION AND THRESHOLDS			
Metric	Key definition(s)	Example calculation	Example thresholds
Debt-to-discretionary earnings	Gainful Employment (GE): Ratio of the median annual loan payments among students who graduated, compared to those same former students' average discretionary annual income.	(\$2,000 median annual debt) \div {(\$30,000 higher of mean or median annual earnings) – (*\$19,140 Federal Poverty Line X 1.5)} $= (\$20,000 \text{ debt}) \div (\$10,860 \text{ discretionary income})$ $= 18.4\% \text{ debt-to-discretionary earnings ratio (completers only)}$	20 percent (pass GE) 30 percent (fail GE)
Within the table calculations, the Federal Poverty Line for 2020 is \$12,760 and 150% of the line is \$19,140. Additional information on the methodology can be found in the endnotes. ⁴⁰			

Definition. We align our analysis as closely as possible to the GE definition of debt-to-discretionary earnings. Debt-to-discretionary earnings is the ratio of the median annual loan payments among students who graduated, compared to those same former students' average discretionary annual income.⁴¹ Discretionary income is the higher of the mean or median annual earnings less than 150 percent of the Federal Poverty Line for a one-person family. In contrast with GE, we define this metric to only include borrowers and exclude students who received grant aid, but no student loans. Due to data limitations, we focus our analysis on college-level mean earnings and median debt, separately, and draw insights on debt-to-discretionary ratios of example borrowers to model how colleges (or programs) might respond to this metric. (See page 23 for more on methodology and data limitations.)

Loan payment amounts used for the numerator are based on the original loan balances accumulated by students and how much they would pay annually at a fixed amount to repay their loans fully. This fixed payment amount is calculated using assumptions about loan interest rates and how long students expect to pay their loans (amortization). Loan payments are *not* based on what students actually pay on their loans, or how much they have due on their loans, due to limitations in federal student loan data.

Data source. This paper examines separate measures of earnings and debt from the College Scorecard and does not directly calculate debt-to-discretionary-earnings rates, due to data limitations. Debt amounts from the National Student Loan Data System (NSLDS) only include federal student loans, which excludes private, non-federal loan debt, that were collected and included for GE.⁴² College Scorecard publishes earnings data obtained from the Department of the Treasury, rather than records from the Social Security Administration (SSA) that were used for GE.⁴³

Promising Thresholds. Under GE, a program is considered passing if the annual loan payment of its typical graduate is less than, or equal to, either eight percent of annual earnings or 20 percent of discretionary income.⁴⁴ Failing programs are those whose graduates have annual loan payments greater than 12 percent of total earnings *and* greater than 30 percent of discretionary earnings. Zone programs fall in between passing and failing. Programs with two in three consecutive years failing or four consecutive years in the zone would lose federal student aid eligibility.⁴⁵ Hence, two potential thresholds for debt-to-discretionary earnings are 20 percent and 30 percent—the passing and failing thresholds, respectively, developed for GE.

Earnings Net of Debt Payments

Rationale. Earnings net of debt payments measures how much income students have left over after making payments on student debt. This metric shows promise for assessing the financial health of students after college and whether their disposable income—after student debt payments—meets some minimum standard.

Researchers have examined multiple variants of this approach.⁴⁶ This paper proposes a definition based on earnings net of *debt* payments rather than college costs or tuition charges.⁴⁷ Students borrow when their available resources, including savings, earnings, and grant and scholarship aid, do not meet the cost of attendance, including tuition and fees, basic living expenses, and books and supplies. In other words, debt payments key in on the portion of costs that grant aid did not cover and that students and family members were not able to pay upfront. The amount borrowed is what matters more for students after they leave college, since it is the money they need to pay back after leaving college, and it is what taxpayers are owed. Assessing earnings against debt payments ties more closely with goals of driving down bad outcomes on student loans. Moreover, broader measures of college costs, after grant aid, are harder to measure and compare than information on student loans already collected by the Department (or loan servicer).⁴⁸

TABLE 3

EARNINGS NET OF DEBT PAYMENTS DEFINITIONS AND THRESHOLDS			
Metric	Key definition(s)	Example calculation	Example thresholds
Earnings net of debt payments	<p>TICAS: How much money will remain from students' earnings after they make their expected student loan payments. Same annual income and debt payment calculations as Gainful Employment (GE), except this metric includes non-completers.</p> <p>CEW Georgetown: Similar definition to TICAS definition, except earnings and payments are monthly, and calculations are based on different methodology than GE.</p>	<p>Using TICAS definition:</p> <p>(\$25,000 higher of median or median annual earnings)</p> <p>–</p> <p>(\$1,000 median annual debt)</p> <p>= \$24,000 earnings net of debt payments (completers and non-completers)</p>	<p>*\$19,140 (150% federal poverty line for one-person family)</p> <p>\$28,000 (typical earnings of high school graduate)</p> <p>\$35,000 (CEW Georgetown definition of a "good job")</p>
Within the table calculations, the Federal Poverty Line for 2020 is \$12,760 and 150% of the line is \$19,140. Additional information can be found in the endnotes. ⁴⁹			

Definition. Earnings net of debt payments measures the amount of money that will remain from annual earnings after making expected student loan payments. We propose that annual earnings and debt payment calculations are made the same way as for GE, with debt payments based on how much borrowers pay with fixed rate loans under various interest rate and amortization assumptions. We also define this metric as including both completers and non-completers, with the metric setting an earnings floor that colleges should be able to meet, even when students' debt amounts are relatively low, as is often the case when they leave college without a degree. This metric can also be calculated at either the college- or program-level.

Data source. The metric would be produced with the same data used for GE debt-to-earnings metrics. Information on earnings would come from SSA (or another agency with comprehensive data) and data on debt amounts would come from NSLDS. The same data limitations for our analysis apply to this metric as was discussed above for debt-to-discretionary earnings.

Promising Thresholds. Several thresholds lend themselves well to this metric. A multiple of the Federal Poverty Line would set a standard that students should at least earn enough income, and have affordable enough student debt to pay personal living necessities. Based on the GE rule, a 150 percent Federal Poverty Line for a single person (\$19,140 for 2020) may be promising as a minimum standard. Several experts recommend the typical earnings of high school graduates (about \$28,000). This may serve as a rough gauge on whether students make more income after attending college than they would have without a college credential.⁵⁰ CEW Georgetown has also proposed \$35,000 as a marker of whether traditional-aged college grad-

uates have attained a “good job.”⁵¹ However, this threshold may be too high for weeding out colleges (or programs) with the highest concentrations of bad educational and loan outcomes. A considerable fraction of associate degree and certificate programs (and colleges) would struggle to meet such a standard.⁵² We consider thresholds lower than their threshold, based on the Federal Poverty Line and high school earnings.

Repayment Rate

Rationale. Repayment rates, which are a measure of the percentage of borrowers who are actively paying down their student loan debt or the percentage of dollars in active repayment, can help illustrate how steadily, and at what pace, borrowers are paying off their student loan debt.⁵³ Borrower-based repayment rates also place relatively more weight on non-completers, while most other variations (e.g., dollar-based) place more weight on borrowers with higher debt amounts, who may be more likely to have completed their program.⁵⁴

In addition, repayment rates are also a way to determine the “success” of schools and their programs by holding colleges accountable for student loan repayments, and thus judging the percentage of borrowers who can successfully repay their loans.⁵⁵ Repayment rates potentially indicate when borrowers in IDR, who make payments based on their income, make payments that are too small to meaningfully make progress toward full repayment of their loans. A well-designed repayment rate is difficult to game, straightforward to measure, and corresponds to whether taxpayers have their investments in student-borrowers repaid.⁵⁶

However, there are open questions about how to define repayment rates, whether repayment can be sufficiently assessed in a relatively short window of time after college, how to interpret repayment progress for borrowers enrolled in IDR, and how repayment rates are influenced by factors outside the control of colleges, such as broader societal disparities, such as the racial-wealth gap, and economic facts, such as interest rates.⁵⁷ Additionally, publically available data from the U.S. Department of Education have yet to fully answer important questions, such as what constitutes a successful repayment, and whether rates should be assessed at the college- or program-level.⁵⁸

TABLE 4

REPAYMENT RATE DEFINITIONS AND THRESHOLDS			
Metric	Key definition(s)	Example calculation	Example thresholds
Repayment rate	College Scorecard: Percentage of all borrowers whose loan balances decreased by at least \$1 among all borrowers who entered repayment, including non-completers. Referred to as “borrower-based” repayment rate. Borrowers whose loan balances are increasing are referred to as experiencing “negative amortization.”	College Scorecard definition: (400 borrowers decreased loan balances) ÷ (1,000 borrowers who entered repayment, completers and non-completers) = 40% borrower-based repayment rate	15 percent (Hatch/Shahen proposal) 35 percent (2011 GE rule) 45 percent (PROSPER Act) 50 percent (considered for GE rule)
	Gainful Employment: Percentage of dollars repaid instead of the percentage of borrowers who repaid any loan balance. Referred to as “dollar-based” repayment rate and similar, in concept, to “volume-based,” “cohort-based,” or “portfolio-based” repayment rate.		

Definition. There are many ways to define repayment rate, but most are based on some measurement of “negative amortization” among borrowers and loans when borrowers’ loan balances are increasing, and payments do not at least equal interest payments. Repayment rates treat loans with increasing, or stagnant, balances as negative outcomes for completers and non-completers.⁵⁹

This paper mostly discusses the borrower-based repayment from the College Scorecard: the percentage of all borrowers whose loan balances decreased by at least \$1 among all borrowers who entered repayment. Other definitions define repayment rate as the percentage of *dollars* borrowed on loans being repaid instead of the percentage of *borrowers* who repaid any loan balance.⁶⁰ This is called a “dollar-based” repayment rate. There are other terms, such as “cohort-based,” that refer to the percentage change in the total outstanding loan balance for a combined cohort of students who left an institution (or program).⁶¹ This paper acknowledges the implications of either a borrower-based or dollar-based approach, when relevant, but the most comprehensive and complete data available provide borrower-based rates among colleges.

Data source. Repayment rates are ultimately derived through detailed loan information from the Office of Federal Student Aid’s National Student Loan Data System (NSLDS).⁶² The U.S. Department of Education tracks loans that were originated at each institution for a cohort of borrowers, and determines which loans have decreasing balances and which ones have increasing or unchanged balances (negative amortization). Rates are calculated based on actual changes in loan balances and repayment behavior, rather than a formula that is based on original loan amounts and assumptions about loan terms. The Department then calculates repayment rates based on the percentage of borrowers, or loan dollars, comprised of loans with decreasing outstanding balances. Loan- and student-level data are not shared with the public, and NSLDS only produces aggregate rates and counts of borrowers.

The U.S. Department of Education has produced institutional rates in two instances. The College Scorecard provides borrowed-based repayment rates to inform consumer decisions of students and families.⁶³ The Department also published preliminary dollar-based repayment rates during the early stages of the 2011 GE regulation, but these same data have not since been reproduced. (A few weeks before the publishing of this report, the Department released yet another variation of repayment rate, a cohort-based approach, that is worth more in-depth consideration and analysis.⁶⁴)

Promising thresholds. A wide range of thresholds has been considered for repayment rate. An appropriate threshold may, to some extent, depend on the measurement window of the metric, since repayment rates increase the longer the borrower has been out of college. Legislation that calls for a repayment one year after leaving college and entering repayment sets a 15 percent threshold, while an HEA reauthorization proposal sets a threshold of 45 percent for a longer-term repayment rate. The 2011 GE rule defined repayment rates about three to four years after college and set a threshold of 35 percent.⁶⁵ Policymakers and experts also considered a 50 percent threshold throughout GE rulemaking but quickly focused on lower thresholds.⁶⁶ This report focuses on thresholds ranging from 25 percent to 50 percent, using the shortest valid measurement period of three to five years, and aligns more closely with thresholds the GE threshold.

METHODOLOGY AND METRIC CRITERIA

Unfortunately, gaps and inconsistencies in publicly available data are too great to precisely model the impacts of the three metrics we explore in this report, or to definitively recommend a single metric or threshold. Still, we believe that examining tangible—though imperfect—information on debt, earnings, and loan repayment of students can help set a path forward for policymakers interested in developing metrics and thresholds.

Institutional Data

The most comprehensive debt and earnings data are available through the U.S. Department of Education's College Scorecard. However, these earnings and debt measures cannot reasonably be combined to model a debt-to-discretionary earnings ratio because they: 1) include different sets of students (federally aided vs. borrowers)⁶⁷; 2) start measurement windows at different points in time (six, eight, and ten years after starting college vs. immediately after graduation or withdrawal); and 3) earnings data are not separated by completers and non-completers, and debt amounts are not converted into *payments* using the GE methodology.⁶⁸ Earnings net of debt payments also cannot be calculated from College Scorecard for the same reasons, except that we define this metric as including both completers and non-completers, so that the inability to disaggregate institution-level earnings by completion matters less.

College Scorecard also provides earnings and debt amounts of graduates in each program, but earnings and debt data are still based on different sets of students, respectively, and earnings are only published as medians and measured too close to graduation to be meaningful.⁶⁹ Institution- and program-level data are also available from the U.S. Census's Post-Secondary Employment Outcomes (PSEO) database and state data systems, but these sources do not include anything close to all institutions and do not typically separate borrowers or federally aided students from those receiving no federal aid.⁷⁰

In contrast with institution-level earnings, College Scorecard provides borrower-based repayments one, three, five, and seven years after leaving college and entering repayment, and these rates are disaggregated by completion status.⁷¹ These rates exclude graduate students and private, non-federal loans. Dollar-based repayment rates were also published for the 2011 GE rule, but these data are much older and were preliminary calculations.⁷² Program-level repayment rates were not available for the analysis in this report.⁷³

With these limitations in mind, we analyze debt and earnings figures separately, and examine institution-level, borrower-based repayment rates to shed light on how colleges may be affected by, and respond to, each metric, if used to determine access to federal aid, by itself, or alongside other metrics. The analysis includes undergraduate students only, who are more likely than graduate students to fall behind on loan payments,⁷⁴ and debt amounts and repayment rates are based on *federal* student loans.⁷⁵ (However, an accountability system will need to include graduate students, who have borrowed greater amounts of debt and experienced increasing difficulties making loan payments in recent years.⁷⁶) Unless otherwise stated, all College Scorecard data are from cohorts aligned with ten-year earnings and five-year repayment rate in the 2014-15 measurement year, when institution-level earnings were last calculated.⁷⁷

Metric Criteria

For each metric, we assess its merits and limitations along the below dimensions. Criteria 1-5 evaluate aspects of how a college may respond to these metrics, and to what extent using these metrics for accountability purposes could improve borrower outcomes, without reducing quality opportunities for low-income students and underrepresented students of color. Criteria 6 and 7 assess to what extent it is feasible to use these metrics to trigger sanctions for accountability purposes.

1. Can colleges credibly move the needle on student loan outcomes? How may they change academic offerings, admissions and recruitment, and pricing and financial aid? How may they withdraw educational opportunities from students?
2. Would any of the metrics lead to unintended consequences with disproportionate impacts for vulnerable students and the colleges that serve them?
3. Does each metric measure outcomes of all student loan borrowers and loan types (e.g., college graduates and non-completers; borrowers with private, non-federal loans)?
4. To what extent is each metric valid during an economic recession, and how does each metric intersect with other macroeconomic factors, like the labor market and interest rates?
5. What is the earliest valid measurement window, and to what extent are short-term outcomes meaningful?
 - Do these metrics credibly work well with tools that the Department already utilizes to measure student debt outcomes (e.g., Cohort Default Rate)?
6. How well does each metric cover (small) institutions and programs after n-size restrictions?
7. What are the implementation challenges to using and validating data for each metric for an accountability system with high-stakes consequences, such as Title IV eligibility?

We weigh debt metrics against each of these criteria based on existing research and college-level College Scorecard data—and given the limitations of those data—we supplement our analysis with simulations of various example borrowers, who represent a range of students and educational outcomes. These simulations help to understand implications for key student populations and gauge the extent to which metrics can serve as valid measures of student loan outcomes. Additionally, examples of borrowers in Income-Driven Repayment (IDR) provide insight into how borrowers' selection of payment plans could interact with repayment rates. The second Appendix, starting on page 66, provides information on borrower examples and what was learned about each metric and borrower scenario.

DISCUSSION AND ANALYSIS: TRADEOFFS BETWEEN DEBT METRICS

Loan outcomes for student-borrowers are affected by factors outside the control of colleges or economic and racial disparities, but there is little doubt that colleges play a major part in how well-positioned students are to make payments on their loans after they leave, as well as how likely they are to avoid facing delinquency or default. Research shows debt outcomes for borrowers vary substantially among institutions and programs, even students who graduate with the same credential.⁷⁸ As mentioned above, CDR and the (now defunct) GE rule both demonstrate that well-designed debt metrics can help policymakers hone in on colleges that are systematically failing to support students through to graduation or leaving students with debt and credentials that have little value.

SUMMARY OF TRADEOFFS

Broadly speaking, we recommend that policymakers prioritize development of an earnings net of debt payments threshold to use for accountability. We believe that this metric is more likely, than available alternatives, to result in colleges focusing on strategies to improve completion and credential quality. We also propose that it is less influenced by racial disparities and macro-economic factors that are less likely to lead to responses from colleges that improve outcomes, without withdrawing opportunities from students. This metric is also well-suited for assessing outcomes of all borrowers because it can include private loans, and sets a minimum earnings floor, that represents a basic income that even students with little debt should earn after college. The main downside of this metric is that there remain hurdles for the U.S. Department of Education to secure the earnings data needed to calculate rates, and it also requires the Department to set up an adequate appeals process for when colleges believe tax data do not fairly represent the employment outcomes of their students.

Repayment rate is the least preferable metric for assessing colleges against a minimum standard on whether they leave students who borrow debt worse off. Repayment rates are highly influenced by factors that make it hard for colleges to move the dial on student outcomes, such as racial disparities that impact how much students borrow and how much they make after college, and changes in interest rates that impact whether loans negatively amortize. Also, interactions between IDR, family size, and interest rates that make short-term rates less predictive of longer-term repayment. The two major upsides of repayment rate are that it is well-suited for measuring outcomes of non-completers—and could push colleges to better support students through their studies.

Debt-to-discretionary earnings falls somewhere in between earnings net of debt payments and repayment. Under debt-to-discretionary earnings, colleges may make efforts to improve credential quality, as well as make their offerings more affordable, so that students leave with less debt. This metric is less likely to be influenced by broader societal inequities, compared to repayment rate. However, it is more sensitive to these kinds of factors, when compared to earnings net of debt payments, given the weight it places on debt amounts. The debt payment calculation (numerator of the metric) is also influenced by changes in interest rates, although basing metric calculation on rolling averages of interest rates can smooth out these fluctuations. The foremost downside of this metric is that it is a less reliable indicator of borrower health for students who do not graduate and have relatively little debt. Policymakers would also have to resolve legal questions about using earnings data, similar to challenges that arise for earnings net of debt payments.

Below we examine each metric against our criteria to highlight these nuances in greater detail.

CRITERION 1) CAN COLLEGES CREDIBLY MOVE THE NEEDLE ON STUDENT LOAN OUTCOMES?

The goal of college accountability metrics is to better protect students from being left worse off after going to colleges and accumulating student debt, whether it is because they motivate colleges to improve or lead students to make different choices about where to attend and whether and how much to borrow. How colleges would respond to what policymakers choose to measure is a critical factor in determining whether it serves these intended goals or exacerbates existing inequalities. Below is a summary of our analysis of potential responses from colleges for each debt metric.

Ideally, colleges can and will respond to what policymakers and other stakeholders measure in student-centered ways. On student debt, they could make their programs less costly, better target grant aid and support services to students with the greatest need, improve educational quality, and invest in more effective career services. However, sometimes colleges instead respond to the threat of accountability sanctions by gaming metrics to avoid negative consequences. In the case of student debt, this could mean not admitting underrepresented students of color or students from low-income families; eliminating socially beneficial academic offerings, such as education and social work programs, that typically lead to lower incomes for graduates; shortening programs at the detriment of educational quality; or other kinds of direct manipulation to cover up poor debt outcomes.⁷⁹

Below we assess how colleges might be expected to react to each of the three metrics through example borrowers. We considered seven examples when we pressure tested each metric and analyzed interactions with IDR: 1) (generic) bachelor's degree graduate; 2) teacher (bachelor's degree graduate); 3) Black bachelor's degree graduate; 4) Black non-completer (attended four-year college); 5) parent with two children (bachelor's degree graduate); 6) parent with one child (associate's degree graduate at for-profit); and 7) (generic) certificate completer. We chose these examples to simulate a range of debt amounts, earnings outcomes, credential types, and key demographics (see discussion and analysis in Appendix II).

TABLE 5

PLUSES AND MINUSES OF HOW COLLEGES WILL LIKELY RESPOND TO EACH METRIC		
Debt-to-discretionary earnings	Earnings net of debt payments	Borrower-based repayment rate*
<ul style="list-style-type: none"> + Rewards colleges conferring quality credentials + Rewards more affordable pricing and improved financial aid practices – Greater influence of debt amounts may prompt colleges to withdraw opportunities from students who have higher debt burdens due to racial and economic disparities 	<ul style="list-style-type: none"> + Rewards colleges that support students through to completion + Rewards colleges conferring quality credentials + Less influenced by debt and factors outside colleges’ control such as racial and economic disparities 	<ul style="list-style-type: none"> – Highly skewed by debt amounts and factors outside colleges’ control, such as racial and economic disparities, loan deferments, and interest rates – Interaction with IDR highly problematic, particularly for students who claim dependents

* This chart summarizes tradeoffs of a borrower-based repayment rate. Some tradeoffs may differ for other variations of repayment rate, as discussed throughout this report.

Debt-to-Discretionary Earnings

Debt-to-discretionary earnings is influenced both by how much students make after college and how much debt they owe. Our example borrower analysis demonstrated relatively higher debt-to-discretionary earnings ratios for the teacher, the associate degree graduate with a dependent child, and the Black bachelor’s degree graduate.

Ideally, these results would help colleges identify changes they can make to increase the affordability and the support services provided to students with the highest need. But we also have to consider unintended consequences. Predictable patterns such as these might increase the odds that some colleges could respond by reducing or eliminating lower paying academic offerings, such as teaching degrees or credentials. Independent students may also have worse ratios due to higher debt loads. On the other hand, the metric may overlook programs with small amounts of debt and relatively lower earnings potential, such as certificate programs (see table 6).

Especially concerning is the fact that the long-standing racial wealth gap, combined with job market disparities, means that Black students who complete their degrees are more likely to experience high debt-to-discretionary earnings ratios before the quality of their college experience is even factored in (see discussion in Appendix II). This concern is heightened at four-year colleges if non-completers are included in measurement. About 3 in 5 Black bachelor’s degree-seeking graduates do not graduate within six years, and yet, Black students, who leave without a degree, still take on more debt than the typical non-completer.⁸⁰ The example Black college student who left without a bachelor’s degree had the highest ratio among the example borrowers in our analysis. When policymakers sanction colleges based on this metric, they will have to take special care to ensure that colleges do not respond by withdrawing opportunities from demographic groups that have lower rates of completion.

TABLE 6

LOWER DEBT OR HIGHER EARNINGS DRIVE DOWN DEBT-TO-DISCRETIONARY EARNINGS RATIOS				
Example Borrower:	Student Debt	Annual Earnings	Calculation: Annual debt payments ÷ (annual earnings – 150% FPL)	Debt-to-discretionary earnings ratio
Bachelor's degree graduate	\$29,000	\$40,000	$\$3,050 \div (\$40,000 - \$19,600)$	14.9%
Certificate completer	\$11,000	\$30,300	$\$1,500 \div (\$30,300 - \$19,600)$	14.1%
Teacher (Bachelor's degree graduate)	\$28,000	\$35,550	$\$2,950 \div (\$35,550 - \$19,600)$	21.1%

Borrower examples based on TICAS calculations using the U.S. Department of Education's Baccalaureate and Beyond (B&B) Longitudinal Study 2016/17 and Beginning Postsecondary Students (BPS) 2012/17, accessed November 2020. Assumes 6.8 percent interest rate. Figures rounded to nearest \$50. See Appendix II for more on borrower examples.

Earnings Net of Debt Payments

This metric works well to measure which colleges successfully graduate students with degrees that allow them to earn enough to exceed a minimum earnings threshold after debt payments. Colleges' performance based on this metric is less affected by how much students borrow compared to debt-to-discretionary earnings. Black bachelor's degree graduates are more likely to meet the metric's threshold, despite typically having more debt and somewhat lower incomes after graduation than their peers, making it less likely that colleges respond to the metric in ways that reduce opportunities that disproportionately harm Black students (see table 7).

However, earnings net of debt payments still could lead colleges to cut back on opportunities to complete socially beneficial, but economically undervalued, degrees. The teacher borrower barely passed the metric in our modeling and research suggests common associate degrees, such as those that train teaching assistants, fare poorly on earnings metrics.⁸¹ Although policy-makers could set a lower threshold to account for socially beneficial lower paying occupations (e.g., 150 percent of the Federal Poverty Line, \$19,140 in 2020), they should not set it so low as to impede their ability to identify poorly performing colleges.

The metric may also lead colleges to withdraw opportunities to students they expect to be less likely to graduate with a college degree, since students who either do not finish their college degree, or complete only a certificate, typically make much lower incomes than college graduates.⁸² Based on the example borrowers, colleges with large shares of non-degree-completers (i.e., non-completers and certificate earners) have greater odds of failing a minimum bar, such as typical earnings of high school graduates.

Although students' incomes are the main driver of this metric, debt amounts can matter for institutions close to the minimum earnings threshold. For instance, a teacher who earns about \$32,000 after college, may help or impede the college's performance when evaluated against

a \$30,000 threshold, depending on whether the borrower had more or less than the typical debt payments for graduates in the same occupation (about \$2,250 in annualized payments at current interest rates). This feature may incentivize institutions near the margin to reduce debt amounts by either lowering costs, investing in grant aid, or withdrawing opportunities from students more likely to take on debt. In contrast, colleges at either extreme on annual income are less likely to see addressing cost and affordability considerations as the clearest path towards improvement on this metric, since lowering, or even eliminating, their students' reliance on debt will only increase earnings net of debt payments by a few thousand dollars in most cases.

TABLE 7

BORROWERS WHO GRADUATE FROM COLLEGE SURPASS EARNINGS NET OF DEBT PAYMENTS THRESHOLD				
Example Borrower:	Student Debt	Annual Earnings	Calculation: Annual earnings – debt payments	Earnings Net of Debt Payments
Black bachelor's degree graduate	\$36,000	\$38,950	\$38,950 – \$3,800	\$35,150
Certificate completer	\$11,000	\$30,300	\$30,300 – \$1,500	\$28,800
Black non-completer (attended four-year college)	\$16,000	\$28,100	\$28,100 – \$2,200	\$25,950

Borrower examples based on TICAS calculations using the U.S. Department of Education's Baccalaureate and Beyond (B&B) Longitudinal Study 2016/17 and Beginning Postsecondary Students (BPS) 2012/17, accessed November 2020. Assumes 6.8 percent interest rate. Figures rounded to nearest \$50. See Appendix II for more on borrower examples.

Repayment Rate

Repayment rate likely leads to the most problematic institutional responses of the three metrics, potentially cutting off opportunities for certain students. This is in large part because it is highly influenced by factors outside colleges' control, including the borrower's choice of repayment plan, economic conditions, and broader societal disparities.

IDR is an important safety net that helps borrowers make payments below the standard ten-year plan and avoid default. Debt metrics should hold colleges accountable when their students enroll in IDR and persistently make little or no payments over long periods. However, repayment rates interact with IDR in ways that could penalize colleges for no fault of their own. For instance, when interest rates rise to a certain level, the metric is likely to count typical undergraduate IDR borrowers as having adverse outcomes, regardless of having successfully completed college and having employment typical of recent college graduates. All our borrower examples, including the typical bachelor's degree graduate (see table 8), experience negative amortization under our higher interest rate assumption of 6.8 percent.

TABLE 8

INTEREST RATES ON IDR LOANS HAVE A GREAT DEAL OF INFLUENCE ON OUTSTANDING LOAN BALANCES				
Example Borrower:	Annual earnings (year 1)	Original loan balance	Loan balance after five years	Percent Change in loan balance
Bachelor's degree graduate at 2.75% interest rate	\$34,000	\$39,000	\$35,600	-8.7%
Bachelor's degree graduate at 6.8% interest rate	\$34,000	\$39,000	\$41,350	+6.0% (negative amortization)

Borrower examples based on TICAS calculations using the U.S. Department of Education's Baccalaureate and Beyond (B&B) Longitudinal Study 2016/17 and Beginning Postsecondary Students (BPS) 2012/17, accessed November 2020. Assumes IDR borrowers make all payments as scheduled. Figures rounded to nearest \$50. See Appendix II for more on borrower examples.

The metric may also severely penalize colleges for serving IDR borrowers who have larger family sizes and care for dependents (e.g., children). IDR allows borrowers with larger families to pay less on their loans so that payments are more manageable for borrowers who have more people to support. IDR also allows for smaller payments early in repayment and then increases payments as disposable income grows or dependents age out (i.e., turn 18). Even under the lower interest rate assumption, our example of a bachelor's degree graduate with two children experiences negative amortization, despite the fact that the borrower graduated and made the most income of the examples we modeled (see table 9). This interaction between repayment rate and IDR may reward colleges for closing opportunities to students who care for children—a population that disproportionately consists of women, people of color, and lower-income students.⁸³ This example, and College Scorecard data, suggest this metric could skew against older, independent borrowers who typically borrow more and have more family members to support, compared to younger, dependent students.

TABLE 9

PARENT BORROWERS IN IDR LIKELY TO HAVE INCREASING OUTSTANDING LOAN BALANCES				
Example Borrower:	Annual earnings (year 1)	Original loan balance	Loan balance after five years	Change in loan balance
Parent with two children (Bachelor's degree graduate)	\$39,000	\$47,000	\$48,000	+2.2% (negative amortization)
Parent with one child (Associate's degree graduate at for-profit)	\$29,000	\$26,000	\$26,600	+2.3% (negative amortization)

Borrower examples based on TICAS calculations using the U.S. Department of Education's Baccalaureate and Beyond (B&B) Longitudinal Study 2016/17 and Beginning Postsecondary Students (BPS) 2012/17, accessed November 2020. Assumes 6.8 percent interest rate. Figures rounded to nearest \$50. See Appendix II for more on borrower examples.

Another issue that policymakers need to sort out is that the metric may not accurately reflect the financial health of students who transfer to another college or go on to graduate school. At four-year public and private nonprofit institutions, students with an in-school deferment comprise nearly half of students who graduated and ended up owing more than they originally borrowed.⁸⁴ When students enroll at another institution of higher education, they get an in-school deferment. Under this deferment, some loan types will continue to accumulate interest, which is then added to students' principal balance the next time they enter repayment. However, existing repayment rates do not exclude these students if they are out of school at the end of the measurement window, and policymakers will need to take this source of negative amortization into account when using repayment rate to trigger sanctions.⁸⁵

While all three metrics reflect the adverse impacts of racial disparities and the concentration of students of color and low-income students at harmful institutions, we conclude that the use of repayment rates for accountability would be more likely to withdraw opportunities from these students, compared to the other metrics. Class- and race-based disparities in family wealth and labor market outcomes drive down repayment rates for lower-income students and students of color, even if they have similar educational outcomes as students from higher-income families and white students.⁸⁶ The relatively low performance of Historically Black Colleges and Universities (HBCUs) on repayment rates underscores this concern (see next criterion). Repayment rates are also sensitive to spells in unemployment and financial shocks that have long-lasting effects on the trajectory of loan payments, especially for students who have less social capital and wealth to absorb these shocks (see also discussion of recessions on page 42).

One bright spot is that repayment rates are consistently much higher for graduates, and may reward institutions that support students toward completion. For instance, over two-thirds of completers who attended community college have reduced their loan balance after five years in repayment, compared to 2 in 5 borrowers who attended community college and did not graduate (see Appendix II). The correlation between repayment rate and completion may allow policymakers to use repayment rate in combination with other debt metrics to spot colleges with

strong completion outcomes, and where students have relatively few issues with making loan payments. However, the interaction of repayment rate with IDR, and social disparities outside the control of colleges, makes it unlikely policymakers can use repayment rates alone to set a minimum standard that is both fair and meaningful.

CRITERION 2) WOULD METRICS LEAD TO DISPROPORTIONATE IMPACTS ON VULNERABLE STUDENTS?

Of critical concern is the potential disproportionate impact that new debt metrics may have on colleges that serve significant numbers and percentages of underrepresented students. This section discusses potential disproportionate impacts on these colleges, as well as other key institution types.

TABLE 10

PLUSES AND MINUSES OF EACH METRIC AND MITIGATION OF DISPROPORTIONATE IMPACTS		
Debt-to-discretionary earnings	Earnings net of debt payments	Borrower-based repayment rate*
<ul style="list-style-type: none"> + Little adverse impact on public and nonprofit four-year colleges + Guards against colleges that offer credentials without quality and relatively large debt amounts +/- Greater influence of debt amounts may unfairly harm HBCUs/MSIs, but exclusion of non-completers may mitigate these impacts - Does not protect against colleges and programs where students earn little after college and have small amounts of debt 	<ul style="list-style-type: none"> + Little adverse impact on public and nonprofit four-year colleges + May set a fairer standard focused on completion and credential quality that has less adverse impacts on HBCUs/MSIs + Protects against colleges with low completion and that leave dropouts with small debt amounts to repay + Guards against colleges that offer credentials without quality, regardless of debt amounts 	<ul style="list-style-type: none"> + Little adverse impact on public and nonprofit four-year colleges + Protects against colleges with low completion and that leave dropouts with small debt amounts to repay + Protects against colleges that leave students with debt burdens and credentials without quality - Mixed performance for community colleges that typically perform better on other metrics - Unfairly harms HBCUs/MSIs due to high influence of broader societal disparities on loan repayment

* This chart summarizes tradeoffs of a borrower-based repayment rate. Some tradeoffs may differ for other variations of repayment rate, as discussed throughout this report.

Black Students and HBCUs

Research is clear that Black students attend schools that have fewer financial resources and that provide less support throughout the education pipeline—disparities that partly contribute to more Black graduates leaving college with debt and having more of it to repay. Among graduates in the class of 2016, 85 percent of Black borrowers graduated with an average of \$34,000 in student loan debt, higher borrowing rates and debt averages, than white, Latino, and Asian graduates.⁸⁷

The case of HBCUs, which enroll 20 percent of Black undergraduates at four-year colleges, underscores this concern. HBCUs were created with the intended purpose of educating Black Americans. Prior to their establishment, and for years afterward, Black students were barred admission to traditionally white institutions. Yet, between 2003 and 2015, public and nonprofit HBCUs experienced a sharp decline in federal funding.⁸⁸ The fact that HBCUs have been under-resourced from the start, continue to experience disinvestment, and serve students with significantly higher needs, means that they must rely more heavily on covering costs by increasing tuition and fees, and this dependence on tuition dollars leaves these schools vulnerable to changes in enrollment.⁸⁹ HBCUs are asked to do more with less, and a well-designed accountability system should mitigate impacts on these colleges, rather than exacerbate them.

Debt-to-Discretionary Earnings

Our analysis suggests that debt-to-discretionary earnings is likely to either benefit, or have little impact, on public and nonprofit four-year colleges with decent graduation rates. Average income earned by federally aided dependent students at public and nonprofit four-year colleges, where at least 50 percent of students complete a degree or certificate within six years, was \$53,950 and \$51,150, respectively, ten years after starting college in 2014-15 (see table 11 below). This level of earnings would almost guarantee decent performance on the metric, because dependent students can only take out a lifetime maximum of \$31,000 in federal loans.⁹⁰ This effectively caps the numerator at no more than about \$4,300 and allows colleges with over \$41,100 in typical earnings among borrowers to stay below the GE threshold of 20 percent on the metric.⁹¹

Colleges with much lower earnings can also do well on debt-to-discretionary earnings, with 63.7 percent of community colleges having had median debt amounts below \$10,000 in 2014-15. Colleges with less than \$10,000 in median debt can have ratios below the GE threshold, since annualized loan payments would be no more than about \$1,500, and ratios remain below the threshold, even when earnings are not much more than that of high school graduates with no college degree (\$28,000).⁹² This feature may also help for-profit colleges that predominantly award shorter-term credentials with smaller debt loads. Roughly 54 percent of for-profit colleges had median debt amounts below \$10,000 (see Appendix III). However, for-profit colleges that have lower quality offerings that do not lead to steady employment, or leave students with higher debt loads than typical, will likely struggle. In 2014-15, two in five for-profit colleges had average earnings ten years after enrollment that was less than \$24,120 (200% of the Federal Poverty Line).

Debt-to-discretionary earnings is likely to place greater pressures on four-year colleges that serve higher percentages of Black students, who typically have higher debt amounts and lower earnings after college. Median debt was typically \$27,800 and \$31,000 at public and nonprofit HBCUs in 2014-15, respectively, and well above their peers in the same sector (see Appendix III). Annual earnings at HBCUs, with less than half of students graduating, typically ranged between \$31,050 and \$35,500, which would be insufficient to pass the GE threshold. However, annual income at HBCUs, where at least half of students graduate, was substantially higher (\$44,150 for dependent students) than HBCUs with mostly non-completers. This shows that many HBCUs award quality credentials, and they may have a good chance at passing a debt-to-discretionary earnings metric that only includes completers (as was the case for GE), although having higher debt amounts means some of these institutions may need to adjust

financial aid, pricing, and academic offerings to pass the metric. Strengthening taxpayer investments in HBCUs is critical.

TABLE 11

AVERAGE EARNINGS OF FEDERALLY AIDED STUDENTS TEN YEARS AFTER ENTRY INTO COLLEGE, MEASURED IN 2014-15, BY COMPLETION, DEPENDENCY STATUS, AND INSTITUTION TYPE						
	Institutions: < 50% of entering undergrads complete a degree or certificate within six years		Institutions: ≥ 50% of entering undergrads complete a degree or certificate within six years		All Institutions	
Institution type	Dependent students	Independent students	Dependent students	Independent students	Dependent students	Independent students
Public four-year	\$43,200	\$43,150	\$53,950	\$55,750	\$49,850	\$49,050
Nonprofit four-year	\$35,350	\$41,100	\$51,150	\$59,150	\$46,950	\$51,900
Public community college	\$37,250	\$35,250	\$40,550	\$34,450	\$37,250	\$34,850
For-profit	\$36,750	\$44,000	\$36,250	\$34,200	\$33,550	\$35,800
Total	\$38,850	\$39,100	\$51,200	\$48,700	\$44,300	\$40,600
MSI type						
Public HBCU	\$35,300	\$35,500	n/a	n/a	\$35,300	\$35,500
Nonprofit HBCU	\$31,050	\$32,000	\$44,150	\$57,750	\$33,950	\$35,900
Public PBI	\$32,000	\$32,450	\$43,650	\$48,750	\$33,350	\$33,350
Nonprofit PBI	\$33,350	\$37,900	\$41,200	\$35,200	\$38,550	\$38,200
Tribal college	\$21,500	\$20,000	\$20,950	\$21,150	\$21,400	\$20,150
Special focus						
Religious affiliation	\$34,800	\$43,100	\$48,800	\$57,150	\$45,150	\$52,650

Source: College Scorecard college-level data, accessed November 2020. Table displays mean earnings for independent and dependent undergraduates (federally aided) who were working and not enrolled ten years after starting college. Institutions are disaggregated by categories of institutions based on level, control, MSI status, religious affiliation (Carnegie Classification), and whether at least half of undergraduates graduated with any degree within six years (IPEDS, Outcomes Measure, 2015-16). Mean earnings were calculated on a two-year pooled cohort of undergraduates who received federal student aid and separated from college during award years 2003-04 and 2004-05. Dollars are inflation-adjusted to 2017. Figures rounded to nearest \$50.

Earnings Net of Debt Payments

Earnings net of debt payments is less driven by debt amounts and predominantly driven by whether borrowers make above a certain minimal level after college. Nevertheless, this metric is also favorable to the bulk of four-year colleges with higher graduation rates. Among colleges where at least half of students completing a degree within six years, 99.7 percent and 98.7 percent of public and nonprofit four-year colleges, respectively, had average earnings greater than that of a typical high school graduate. As previously indicated, typical earnings for students at public and nonprofit colleges, where at least half of students graduate, are well-above any likely accountability threshold, even after subtracting a few thousand dollars based on debt payments of students at these colleges.

This metric is likely to be toughest on colleges with extremely low annual earnings after graduation, especially for-profit colleges that predominantly award less valued certificates and associate degrees. About 2 in 5 federally aided students at for-profit institutions made at least as much as typical high school graduates, compared to about 90 percent of students at community colleges, and over 95 percent of students at public and nonprofit four-year colleges (see table 12). Although lower thresholds are possible, larger debt payments for students at for-profit colleges would drive performance even lower and for-profit colleges would disproportionately face sanctions.

HBCUs likely place near the borderline of sanctions under this metric, especially if policymakers set a relatively high bar, such as the typical earnings of high school graduates. Making less than this minimum threshold may not be an uncommon experience for Black college students who leave college without a bachelor's degree, and even Black college graduates typically have lower earnings than their peers, due to discrimination and employment disparities. About 3 in 4 nonprofit HBCUs and public PBIs had average earnings at least equal to a typical high school graduate in 2014-15, while virtually all these same colleges had average earnings greater than lower thresholds based on the Federal Poverty Line.

TABLE 12

INSTITUTIONS AT OR ABOVE THRESHOLDS ON AVERAGE EARNINGS TEN YEARS AFTER ENTRY INTO COLLEGE, MEASURED IN 2014-15, BY INSTITUTION TYPE			
Institution type	Institutions w/ average earnings ≥ \$18,090	Institutions w/ average earnings ≥ \$24,120	Institutions w/ average earnings ≥ \$28,000
Public four-year	99.8%	98.9%	98.2%
Nonprofit four-year	99.9%	98.0%	96.0%
Public community college	99.9%	97.8%	90.1%
For-profit	94.5%	61.1%	40.2%
Total	98.3%	87.2%	78.4%
MSI type			
Public HBCU	100.0%	96.0%	90.0%
Nonprofit HBCU	100.0%	97.7%	72.1%
Public PBI	100.0%	100.0%	76.9%
Nonprofit PBI	100.0%	100.0%	100.0%
Tribal college	92.9%	32.1%	14.3%
HIS	99.7%	95.8%	94.3%
Special focus			
Religious affiliation	100.0%	98.6%	96.0%

Source: College Scorecard college-level data, accessed November 2020. The table displays calculations based on mean earnings for federally aided undergraduates who were working and not enrolled ten years after starting college. Institutions are disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). Mean earnings were calculated on a two-year pooled cohort of undergraduates who received federal student aid and separated from college during award years 2003-04 and 2004-05. The thresholds for earnings are based on the 2017 Federal Poverty Line for a single adult and typical earnings of a high school graduate: \$18,090 = 150% of the Federal Poverty Line in 2017; \$24,120 = 200% of the Federal Poverty Line in 2017; and \$28,000 = income of average high school graduate.

Repayment Rate

Repayment rate generally benefits—or would not trigger sanctions for—colleges with higher completion rates and stronger labor market outcomes, given that the metric primarily reflects how well borrowers are able to make payments and reduce their loan balances. Average five-year repayment rates at public four-year and nonprofit four-year colleges, respectively, were 65.9 percent and 66.6 percent in 2014-15, and repayment rates are even higher among dependent students and students who graduate before separation (see Appendix II). Over 95 percent of public four-year colleges and nonprofit four-year colleges have a repayment rate greater than 35 percent—the threshold used for the 2011 GE rule (see table 13).⁹³

However, repayment rates are likely to disparately impact colleges that serve underrepresented students of color and low-income families, especially if they produce lower earning credentials, have higher rates of non-completion, or enroll students who have fewer savings and less ability to absorb financial shocks. Only 46.5 percent and 27.9 percent of public and nonprofit HBCUs, respectively, had repayment rates of at least 35 percent. The borrower examples and disaggregated repayment rate data also suggest roughly half of *graduates* at HBCUs have negatively amortizing loans, limiting how much graduating more borrowers will likely improve repayment rates among these colleges (see Appendix II). HBCUs would likely have to also reduce debt burdens, or increase economic payoffs of their credentials to sufficiently improve repayment rates—outcomes that may be difficult to achieve without addressing broader racial and economic disparities, or withdrawing educational opportunities.

For-profit institutions also have worse repayment rates in comparison to other institution types, with over 2 of 5 for-profit colleges struggling to meet a 35 percent threshold. However, some for-profit colleges may be able to muster a minimum bar on repayment rate because for-profit colleges skew toward shorter term credentials that leave students with relatively lower amounts of debt that are easier to pay down (see table 13). Debt amounts and racial disparities likely have a stronger influence on repayment rate than the two earnings-based metrics. Repayment rates at for-profit colleges are typically somewhat higher than at HBCUs, underscoring how much this metric is influenced by racial disparities that drive down earnings and drive up debt for Black students.

Community colleges have more mixed results on repayment rate since negative amortization is not an uncommon experience for community college students. Fifty-six percent of community colleges have repayment rates below 50 percent. That said, few colleges place at the very bottom on repayment rate, with 91.4 percent of community colleges having a repayment of at least 35 percent. Diverse student bodies with varying socioeconomic backgrounds, modest earnings after colleges, and small amounts of debt all likely contribute to most community colleges having repayment rates that are neither extremely high nor low. Impact on community colleges likely depends on how thresholds are set and how repayment rate fits together with other debt metrics.

TABLE 13

INSTITUTIONS AT OR ABOVE POTENTIAL THRESHOLDS FOR FIVE-YEAR REPAYMENT RATE, MEASURED IN 2014-15, BY INSTITUTION TYPE				
Institution type	% of institutions w/ repayment rate ≥ 25%	% of institutions w/ repayment rate ≥ 30%	% of institutions w/ repayment rate ≥ 35%	% of institutions w/ repayment rate ≥ 50%
Public four-year	99.7%	97.6%	95.4%	83.6%
Nonprofit four-year	97.4%	96.4%	95.3%	87.9%
Public community college	99.2%	96.8%	91.4%	44.0%
For-profit	83.0%	71.0%	58.7%	25.6%
Total	93.4%	88.1%	82.2%	56.5%
MSI type				
Public HBCU	93.0%	67.4%	46.5%	7.0%
Nonprofit HBCU	53.5%	39.5%	27.9%	9.3%
Public PBI	93.9%	81.8%	60.6%	12.1%
Nonprofit PBI	83.3%	75.0%	66.7%	20.8%
Tribal college	100.0%	100.0%	100.0%	0.0%
Special focus				
Religious affiliation	96.6%	95.7%	94.3%	88.2%

Source: College Scorecard college-level data, accessed November 2020. The table displays calculations based on repayment rates for undergraduate borrowers five years after leaving college and entering repayment: the fraction of repayment cohort who are not in default with loan balances that have declined five years since entering repayment. Institutions disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). Repayment rates were calculated on a two-year pooled cohort of undergraduates who started repayment on federal loans in FY2009 and FY2010.

Religious Institutions

We also examined the average debt, post-college earnings, and loan repayment at religiously affiliated colleges. These institutions have similar outcomes as nonprofit four-year colleges—the institution type for the great majority of religiously affiliated schools (see tables above). More often than not, students graduate within six years after starting at these colleges and experience decent loan outcomes (see Appendix III). Although individual religiously affiliated colleges may have graduates who go into lower paying occupations or missionary work, loan outcomes are typically good enough, on the whole, that these colleges would rarely face sanctions under the metrics and thresholds considered in this paper.

COLLEGE-LEVEL VS. PROGRAM-LEVEL DEBT METRICS

While this report mainly focuses on institution-level data to examine debt metrics, program-level debt metrics could add a lot of value and are worth consideration, given that outcomes vary within institutions by credential level and field of study. Students with higher credentials typically accumulate more debt, but they also make more after graduation. Among federally aided students, median earnings of bachelor's degree graduates, associate's degree graduates, and certificate completers were \$35,600, \$31,900, and \$25,200, respectively, two years after graduating from college in 2016-17 (see table 14). These differences across credentials and programs are even starker for longer-term earnings.⁹⁴ Even within the same credential level and college, earnings can vary considerably because some majors lead to higher earning occupations than others. The highest and lowest earning programs, within the same college, differ by \$42,600 and \$38,950 at the typical public and nonprofit college, respectively, although the variation is much lower at for-profits. Debt varies less than earnings within the same institutions, but there can still be meaningful differences.⁹⁵

TABLE 14

MEDIAN PROGRAM-LEVEL EARNINGS TWO YEARS AFTER GRADUATION, MEASURED IN 2017-18, BY CREDENTIAL LEVEL AND INSTITUTION CONTROL				
Credential level	Public	Nonprofit	For-profit	All institutions
Professional	\$68,950	\$64,250	\$49,100	\$65,400
Ph.D.	\$69,350	\$72,500	\$72,500	\$71,000
Masters	\$51,250	\$54,650	\$50,000	\$52,600
Bachelor's	\$35,250	\$36,150	\$35,850	\$35,600
Associate's	\$32,950	\$34,000	\$27,900	\$31,900
Certificate	\$31,150	\$26,600	\$21,800	\$25,200
Total	\$37,800	\$41,550	\$25,950	\$37,750

Source: College Scorecard program-level data, accessed January 2021. The table displays median earnings of federally aided undergraduates two years after graduation by credential level. Earnings are calculated on a two-year pooled cohort of undergraduates who received federal student aid and separated from college during award years 2014-15 and 2015-16. Dollars are inflation adjusted to 2019. Figures rounded to nearest \$50.

TABLE 15

AVERAGE RANGE OF MEDIAN PROGRAM-LEVEL EARNINGS, WITHIN THE SAME INSTITUTION, TWO YEARS AFTER GRADUATION, MEASURED IN 2017-18, BY INSTITUTION CONTROL				
	Public	Nonprofit	For-profit	All institutions
Earnings at highest program, less earnings at lowest program within same institution	\$42,600	\$38,950	\$7,250	\$29,100

Source: College Scorecard program-level data, accessed January 2021. The table displays average range of median earnings among programs within the same college, disaggregated by institution control. Earnings were calculated on a two-year pooled cohort of undergraduates who received federal student aid during award years and separated from college during award years 2014-15 and 2015-16. Dollars are inflation adjusted to 2019. Figures rounded to nearest \$50.

Another benefit of more granular metrics is that they could spot programs that offer substantially lower quality instruction and student services within the same school. Program-level metrics may also better protect students at historically brick and mortar colleges that are now rapidly expanding online programs during the COVID-19 pandemic. Differentiating programs could help separate exclusively online programs and hybrid programs from other offerings.⁹⁶ More research on the recent surge in third-party online providers is needed, but one-third of the increase in loan default during the 2000s was associated with the entry of online programs, following the relaxation of rules for lending to an online college.⁹⁷

The main downside of program-level metrics is that programs often serve small numbers of students, and some underperforming programs may avoid sanctions due to insufficient n-size. While the first year of debt and earnings from College Scorecard data were both reported for programs graduating the most students (62.8%), they excluded 4 in 5 (80.6%) programs that did not pass the Department's privacy standards.⁹⁸ Programs without data are commonplace at smaller colleges. Over 90 percent of public and nonprofit four-year colleges, with no more than 2,000 students, have at least one program without debt or earnings data on the College Scorecard.⁹⁹

There are also practical considerations on how to define program level metrics. How to deal with non-completers—especially those who left their institution but never declared a field of study? How to deal with program switchers within a program level repayment rate? Are *all* programs substantively different? Is an Engineering program as different from an English program, as English is from History?

How to account for non-completers matters a lot, as one-quarter of community college students, who owed more than they originally borrowed within 12 years of entering school, never declared a major or were not in a degree program.¹⁰⁰ This may be hard to address, without college-level metrics, since it is easy to know if student left institution, but hard to identify the program of a dropout, who did not yet declare a major, or a community college student, who was transferring between colleges or programs. Subsequent enrollment in college also influences overall borrowing amounts, and decisions about repayment that are hard to factor into a repayment rate for the original institution.¹⁰¹

Another concern is that the use of program-level metrics could push some schools to advise students, perceived to be at-risk, into different programs. That said, program-level metrics may protect students from being funneled into lower quality credentials, while college-level metrics could see access denied altogether. Students at programs losing federal student aid eligibility may more easily be able to find alternatives than students whose entire school was closed.

College-level and program-level debt metrics are both options worthy of consideration, given the benefits of more targeted sanctions and the challenges in defining programs and mitigating n-size exclusions. Policymakers could consider a middle-ground metric definition that would either combine similar programs together or assess all programs within the same credential level together.¹⁰² Policymakers should also consider ways to separate out exclusively online programs and hybrid from other programs in the same college. These intermediate approaches could differentiate outcomes within colleges, avoid all or nothing accountability, and mitigate n-size concerns.

CRITERION 3) DOES EACH METRIC MEASURE OUTCOMES OF ALL BORROWERS AND LOAN TYPES?

Including all of colleges' borrowers helps mitigate the risk that colleges may manipulate a debt metric by shifting borrowers, likely to have adverse outcomes, into excluded populations or encouraging borrowers to take out loans excluded from the metric. Below we discuss how well the three metrics cover both borrowers and loan types.

TABLE 16

PLUSES AND MINUSES OF HOW EACH METRIC COVERS ALL STUDENTS AND LOAN TYPES		
Debt-to-discretionary earnings	Earnings net of debt payments	Borrower-based repayment rate*
<ul style="list-style-type: none"> + GE rule developed process for calculating metric with both federal and private, non-federal loans - Likely a less reliable metric for non-completers with little debt 	<ul style="list-style-type: none"> + Establishes earnings floor to help guard against adverse outcomes among non-completers with little debt + Could include private loans (similar to debt-to-discretionary earnings) 	<ul style="list-style-type: none"> + Directly signals when there are adverse outcomes among non-completers with little debt - Less operationally feasible to secure needed data to calculate rates that include private loans

* This chart summarizes tradeoffs of a borrower-based repayment rate. Some tradeoffs may differ for other variations of repayment rate, as discussed throughout this report.

Borrowers Who Do Not Graduate and Leave with Little Debt

A common critique of debt-to-discretionary earnings is that, because it only includes completers, it is potentially susceptible to institutions churning students through programs without awarding a credential, so that students are excluded from the metric.¹⁰³ Debt-to-discretionary earnings does not lend itself to measuring debt burdens of non-completers because debt amounts are typically much lower among these borrowers, compared to graduates (see table 17). Low levels of debt among non-completers—who comprise a majority of borrowers who leave college with less than \$10,000 of debt—mean that a variation of debt-to-discretionary earnings that includes all borrowers could reward, rather than sanction colleges that do not see students through to graduation.¹⁰⁴ Borrower examples also suggest a similar issue for certificate programs, where even completers have small amounts of debt, but do not necessarily leave with quality credentials (see first criterion). Lower debt burdens make it possible for colleges with relatively lackluster completion and earnings to avoid sanctions, as long as borrowers make slightly more than the 150 percent of the Federal Poverty Line that defines discretionary income.¹⁰⁵

Earnings net of debt payments can more easily guard against adverse outcomes among non-completers, and reward colleges for supporting students through to graduation. Earnings net of debt payments establishes an earnings floor that institutions must meet, even if debt payments are close to zero. Setting this floor high enough—perhaps earnings of high school graduates—may help protect against colleges where too few students graduate and too many offerings have little payoff.

Repayment rate also works well when non-completers are included. Borrower-based repayment rates are typically higher among borrowers who graduate before entering repayment (see Appendix II). The strong link between completion and loan payments means that repayment rate likely rewards college that graduate most borrowers, and sanctions them when there are many dropouts. One caveat is that dollar-based repayment rates may correlate with completion somewhat less strongly, since they place more weight on borrowers with higher debt, who likely graduate with some form of credential.

TABLE 17

MEDIAN FEDERAL STUDENT DEBT AND NUMBER OF BORROWERS LEAVING COLLEGE IN 2014-15, BY COMPLETION STATUS AND INSTITUTION TYPE						
Institution type	Median debt of all borrowers	Median debt of borrowers who graduate with degree or certificate	Median debt of borrowers who did not graduate	Number of borrowers	Number of borrowers who graduate with degree or certificate	Number of borrowers who did not graduate
Public four-year	\$12,500	\$20,550	\$7,250	2,902,450	1,361,850	1,550,250
Nonprofit four-year	\$16,450	\$25,150	\$8,250	1,489,550	696,900	792,850
Public community college	\$5,500	\$9,200	\$4,750	1,965,950	389,500	1,564,750
For-profit	\$9,150	\$9,850	\$4,750	2,072,450	877,500	1,201,650
Total	\$9,500	\$13,300	\$5,500	8,348,850	3,289,000	5,063,200
MSI type						
Public HBCU	\$14,250	\$27,800	\$9,500	116,150	34,750	81,750
Nonprofit HBCU	\$13,650	\$31,000	\$9,500	44,950	14,150	30,200
Public PBI	\$4,500	\$8,000	\$4,050	135,450	27,050	108,850
Nonprofit PBI	\$12,800	\$27,000	\$9,500	50,300	20,400	30,150
Tribal college	\$5,800	\$11,650	\$4,650	1,600	450	1,150
Special focus						
Religious affiliation	\$16,100	\$25,250	\$8,500	768,600	355,350	411,250

Source: College Scorecard college-level data, accessed November 2020. This table displays median debt for federal borrowers, disaggregated by completion status. Institutions are disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). Median debt is calculated using two-year pooled cohort of undergraduates who started repayment on federal loans in FY2014 and FY2015. Figures rounded to nearest 50. Borrower totals may not add up due to rounding and differences in data that did not meet privacy standards.

Borrowers with Private Loans

A strength of debt-to-earnings metrics, which include debt-to-discretionary earnings ratios used for GE, was that it included private loan amounts in the calculation of typical debt payments.¹⁰⁶ This prevented colleges from encouraging private borrowing among students to avoid accountability tied to federal loan outcomes. Debt-to-discretionary earnings and earnings net

of debt payments are both more likely to be able to accommodate private loan debt in their calculations than repayment rate. The U.S. Department of Education would only need to collect information on private loans that would be sufficient to calculate cumulative debt amounts at a single point in time, to derive debt-to-discretionary earnings. Repayment rates would require more detailed information on private loan statuses and changes in private loan balances. In fact, the Department has previously collected private loan amounts and calculated debt-to-earnings rates for GE.¹⁰⁷

Policymakers may find it more difficult to incorporate private loan outcomes into repayment rates, making it vulnerable to manipulation, when colleges encourage, or even steer, borrowers toward private loans.¹⁰⁸ Repayment rates are calculated using National Students Loan Data System (NSLDS), which does not store similar data on private debt, and cannot do so without expanded authority and infrastructure to collect data from nonfederal lenders.¹⁰⁹

CRITERION 4) TO WHAT EXTENT IS EACH METRIC VALID DURING AN ECONOMIC RECESSION?

Well-designed debt metrics should be able to fairly assess a school's performance during both good and bad economic times. Policymakers need to have sufficient confidence that a college can meaningfully improve, without closing off opportunities for communities who are hit hardest by recessions. For instance, Black college graduates have been more greatly impacted on the job market than their white peers during the COVID-19 pandemic.¹¹⁰ Recessions may also impact various regions of the country differently and worsen financial outcomes and debt burdens for students living in local economies that are most severely impacted.¹¹¹ Ideally, policymakers should mitigate the influence that economic recessions have on debt metrics and accountability sanctions to allow for a clearer signal of institutional performance.

TABLE 18

PLUSES AND MINUSES OF HOW DEBT METRICS WILL LIKELY RESPOND TO A RECESSION		
Debt-to-discretionary earnings	Earnings net of debt payments	Borrower-based repayment rate*
<ul style="list-style-type: none"> + GE rule developed mitigation strategies to smooth out year-to-year fluctuations for debt and earnings metrics - Economic conditions can influence earnings, unemployment, and debt accumulation, which all influence the metric 	<ul style="list-style-type: none"> + GE rule developed mitigation strategies to smooth out year-to-year fluctuations for debt and earnings metrics +/- Less sensitive to student debt burdens, which can increase during recessions - Economic conditions can influence earnings and unemployment 	<ul style="list-style-type: none"> +/- Ambiguous interaction between repayment rates, IDR, and interest rates during a recession - Highly influenced by economic conditions since it is sensitive to changes in debt, earnings, and short-term financial shocks that can occur during hard times - Mitigation strategies developed during GE rulemaking may be less effective

* This chart summarizes tradeoffs of a borrower-based repayment rate. Some tradeoffs may differ for other variations of repayment rate, as discussed throughout this report.

Economic downturns influence all three debt metric options featured in this paper to some extent, but some metrics are more sensitive to prevailing economic factors than others. Performance on all three metrics is likely to worsen during a recession due to stagnant wages and increased unemployment, which likely drive down the typical earnings of borrowers. For example, during the Great Recession average earnings among federally aided students, six years after they initially enrolled at community colleges, declined from \$29,750 in 2007-08 to \$28,850 in 2009-10 (-3.1%) (see table 19). The share of federally aided students with no earnings at all increased from 14.1 percent to 16.6 percent (+17.8%) at community colleges from 2007-08 to 2009-10 (see table 20).¹¹²

For debt-to-discretionary earnings and earnings net of debt payments, higher unemployment directly impacts the metric because it decreases discretionary earnings among a portion of borrowers. Stagnant or declining wages are also more likely to occur during a recession and directly worsen performance on these two earnings-based metrics.¹¹³ Making matters worse, debt-to-discretionary earnings is more sensitive to increased reliance on debt, as families have less income and savings to pay for college, and public colleges and universities pass on state funding cuts to students.¹¹⁴ Median debt increased across all institution types during the Great Recession (see table 22).

TABLE 19

AVERAGE EARNINGS OF STUDENTS SIX YEARS AFTER ENTRY INTO COLLEGE, AS MEASURED BEFORE AND AFTER THE 2008 FINANCIAL CRISIS, BY INSTITUTION TYPE				
Institution type	2007-2008	2009-2010	Change	Percent change
Public four-year	\$38,950	\$37,650	-\$1,300	-3.4%
Nonprofit four-year	\$41,500	\$40,550	-\$950	-2.3%
Public community college	\$29,750	\$28,850	-\$900	-3.1%
For-profit	\$31,450	\$30,200	-\$1,250	-4.0%
Total	\$35,150	\$33,750	-\$1,400	-4.0%

Source: College Scorecard college-level data, accessed in November 2020. This table displays the mean earnings of federally aided undergraduates who were working and not enrolled six years after starting college. Earnings were calculated on a 2000-01 and 2001-02 pooled cohort of undergraduates, who received federal student aid, which was measured six years later in 2007 and 2008, while the pooled cohort 2002-03 and 2003-04 was measured in 2009 and 2010. Dollars are inflation dollars adjusted to 2014 dollars. The sample is limited to institutions that have earnings data in both measurement years. Figures rounded to nearest \$50.

TABLE 20

PERCENTAGE OF STUDENTS WITH NO EARNINGS SIX YEARS AFTER ENTRY INTO COLLEGE, AS MEASURED BEFORE AND AFTER THE 2008 FINANCIAL CRISIS, BY INSTITUTION TYPE				
Institution type	2007-2008	2009-2010	Percentage point change	Percent change
Public four-year	8.0%	9.3%	+ 1.3%	+ 17.1%
Nonprofit four-year	9.3%	10.9%	+ 1.6%	+ 17.0%
Public community college	14.1%	16.6%	+ 2.5%	+ 17.8%
For-profit	14.9%	18.5%	+ 3.6%	+ 23.9%
Total	11.6%	14.1%	+ 2.5%	+ 21.5%

Source: College Scorecard college-level data, accessed November 2020. This table displays the share of federally aided undergraduates who were not working and not enrolled six years after starting college. Earnings were calculated on a 2000-01 and 2001-02 pooled cohort of undergraduates, who received federal student aid, which was measured six years later in 2007 and 2008, while the pooled cohort 2002-03 and 2003-04 was measured in 2009 and 2010. The sample is limited to institutions that have earnings data in both measurement years.

However, earnings net of debt payments is somewhat less sensitive to how much debt students accumulate, according to our analysis of borrower examples (see Appendix II). Additionally, policymakers may be able to mitigate the effects of recessions on this metric because they could adjust earnings for changes in macroeconomic conditions, which are outside colleges' control, as well as changes in typical earnings in areas where colleges operate.¹¹⁵

Repayment rates are also driven downwards during recessions, as borrowers' financial health and job prospects deteriorate and borrowers increasingly miss loan payments.¹¹⁶ From 2007-08 to 2009-10, the average one-year repayment rate fell from 55.9 percent to 45.1 percent for students who attended community colleges (-10.8 pct pts) and from 49.0 percent to 30.7 percent for students who attended for-profit colleges (-18.3 pct pts) (see table 21). Such large swings in repayment rate, over just a few years, suggests that it would be hard for policymakers to set an absolute threshold to the metric that would apply a fair standard over time. Even judging institutions against the relative performance of other institutions may be difficult, because repayment rates appear to change differentially during a recession for different kinds of colleges.

TABLE 21

AVERAGE ONE-YEAR REPAYMENT RATE FOR BORROWERS LEAVING COLLEGE, AS MEASURED BEFORE AND AFTER THE 2008 FINANCIAL CRISIS, BY MEASUREMENT YEAR AND INSTITUTION TYPE				
Institution type	2007-2008	2009-2010	Percentage point change	Percent change
Public four-year	72.0%	61.3%	-10.7%	-14.8%
Nonprofit four-year	74.9%	61.6%	-13.3%	-17.8%
Public community college	55.9%	45.1%	-10.8%	-19.3%
For-profit	49.0%	30.7%	-18.3%	-37.2%
Total	63.1%	48.5%	-14.6%	-23.2%

Source: College Scorecard college-level data, accessed November 2020. The table displays repayment rates for undergraduate borrowers one year after leaving college and entering repayment: the fraction of repayment cohort who are not in default with loan balances that have declined five years since entering repayment. Institutions disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). Repayment rates were calculated on a two-year pooled cohort of undergraduates, who started repayment on federal loans in FY2006 and FY2007, which was measured in 2007 and 2008, while the FY2009 and FY2010 was measured in 2009 and 2010.

TABLE 22

MEDIAN FEDERAL STUDENT DEBT OF GRADUATES, AS MEASURED BEFORE AND AFTER THE 2008 FINANCIAL CRISIS, BY MEASUREMENT YEAR AND INSTITUTION TYPE				
Institution type	2007-2008	2009-2010	Dollar change	Percent change
Public four-year	\$14,250	\$15,750	+ \$1,500	+ 10.5%
Nonprofit four-year	\$17,000	\$18,450	+ \$1,450	+ 8.4%
Public community college	\$6,150	\$7,500	+ \$1,400	+ 22.4%
For-profit	\$6,650	\$9,500	+ \$2,850	+ 43.4%
Total	\$10,000	\$12,150	+ \$2,150	+ 21.4%

Source: College Scorecard college-level data, accessed November 2020. This table displays the median debt of undergraduates, who graduated with any federal debt, calculated on a two-year pooled cohort for FY2007 and FY2008 and another pooled cohort for FY2009 and FY2010. The sample is limited to institutions that have debt data in both measurement years. Figures rounded to nearest \$50.

Clearly, recessions are likely to impact all three debt metric options discussed, raising concerns that colleges will be held accountable for factors outside their control, and that sanctions could take away access to quality credentials for underrepresented students of color and lower-income families who are typically more impacted by recessions. This is particularly concerning given that earnings and repayment rate declined most at open access colleges during the Great Recession.

Policymakers may need to consider ways to refine debt metrics, thresholds, and rewards and sanctions associated with the thresholds to mitigate these potentially harmful consequences. For example, the GE rule calculated debt-to-earnings metrics based on at least two years of cohorts and assessed at least two years of rates before programs could potentially lose Title IV eligibility. Strategies such as these can help smooth out short-term fluctuations in earnings, debt amounts, and loan repayment.¹¹⁷ Earnings thresholds could also be adjusted for changes in local economic conditions. Unfortunately, these strategies may be less effective in mitigating the influence of downturns on repayment rates, which are affected by multiple factors that worsen during recessions.

THE IMPACT OF CHANGES IN INTEREST RATES

One factor that could offset the impact of a recession is that interest rates typically decline during a downturn, as money piles into safer assets, and reduce the interest portion of debt payments. Simulations of borrower examples showed that decreased interest rates can substantially improve debt-to-discretionary earnings ratios and make it easier for borrowers to avoid negative amortization—and thus improve repayment rates (see Appendix II). Recessionary dips in interest rates are less of a factor for earnings net of debt, which is predominantly driven by annual earnings, and less sensitive to debt amounts and interest rates.

However, the extent to which declining interest rates can offset increased strains on borrowers remains highly uncertain, and several factors suggest changes in interest rates are blunt instruments in offsetting the impacts of economic downturns. First, there is far from a perfect negative relationship between interest rates and economic growth. The 10-year Treasury yield that underpins interest rates on federal student loans has dipped during recessions, but coincidentally, has been on a long-term decline over the past four decades, during both good and bad economic times. Now that the 10-year Treasury yield is near-zero, it is unclear how well it will adjust to economic conditions.¹¹⁸ Second, policymakers have not always tied federal student loan interest rates to prevailing market rates, and it is no guarantee interest rates on student loans will continue to be set this way in perpetuity. Third, there may be a lag between when interest rates decline during a recession and when students in college take out loans with reduced interest. Since interest rates on student loans are typically fixed, the students who leave college during a recession (and need the most help) are likely have loans that reflect previously higher interest rates.

The GE rule mitigated fluctuations in interest rates and based calculations for debt-to-earnings on six-year rolling averages of interest rates on federal student loans. This could help mitigate impacts of changes in interest rates for debt-to-discretionary earnings and earnings net of debt payments. However, this feature cannot mitigate the influence of interest rates on repayment rates, as that metric is affected by the actual interest rates on borrowers' individual loans and whether rates make it easier or more difficult to make progress paying down balances.

CRITERION 5) WHAT IS THE EARLIEST VALID MEASUREMENT WINDOW?

In measuring student loan outcomes, there is a tension between making sure that measurement occurs far enough into repayment that results are stable, and reflect current and likely longer-term risk, but also soon enough after enrollment that results can reasonably be attributed to the college or program. This section discusses the earliest measurement window that could reasonably be used for each metric.

TABLE 23

PLUSES AND MINUSES OF REQUIRED MEASUREMENT WINDOW FOR EACH METRIC		
Debt-to-discretionary earnings	Earnings net of debt payments	Borrower-based repayment rate*
<ul style="list-style-type: none"> + Somewhat more stable over time because debt amounts in calculation do not change after separation from college + GE rule established two to three years may be earliest valid measurement window 	<ul style="list-style-type: none"> +/- Somewhat longer measurement window likely needed because metric is predominantly driven by earnings, not amount borrowed +/- Metric should probably be measured about five years after separation from college - May not sufficiently guard against harm at recently opened colleges due to longer measurement window 	<ul style="list-style-type: none"> +/- Historical repayment rates of colleges have been fairly stable at about three to five years after separation from college - For IDR borrowers, repayment trajectories may change course over time, making a longer measurement window necessary - Some IDR and interest rate scenarios indicate that even applying a negative amortization test ten years after college may not reliably predict lifetime repayment - May not sufficiently guard against harm at recently opened colleges due to longer measurement window

* This chart summarizes tradeoffs of a borrower-based repayment rate. Some tradeoffs may differ for other variations of repayment rate, as discussed throughout this report.

Shorter-term measures are also preferable because many newer institutions, or those that have had a recent change in data reporting, will not be covered by metrics that lag over a longer time. Barely half (52.8%) of for-profit institution branches operating in 2014-15 existed ten years prior and would be included in a 2004-05 cohort. Only about 2 in 3 (69.6%) for-profit institution branches existed just five years prior to 2014-15 (see table 24). Although the universe of public and nonprofit colleges is much more stable over time, and main campuses that report federal student aid data change somewhat less often, this churn of institutions and branch locations among for-profits suggests that longer-term metrics will be less effective. The worst outcome of default is overwhelming concentrated among these colleges, so that long measurement windows may not guard against some of the worst actors.¹¹⁹

TABLE 24

PERCENTAGE OF 2014-15 INSTITUTIONS OPERATING IN PRIOR YEARS, BY INSTITUTION TYPE						
	Unique institution campuses/ branches (IPEDS unit ID)			Main institution (six-digit OPEID)		
Institution type	10-years prior (2004-05)	5-years prior (2009-10)	3-years prior (2011-12)	10-years prior (2004-05)	5-years prior (2009-10)	3-years prior (2011-12)
Public four-year	97.6%	98.0%	98.3%	98.4%	98.7%	99.1%
Nonprofit four-year	91.7%	95.4%	97.9%	93.3%	96.2%	98.1%
Public community college	94.6%	96.6%	98.6%	94.8%	96.7%	98.7%
For-profit	52.8%	69.6%	85.1%	66.3%	79.7%	89.8%
Total	72.5%	82.5%	91.2%	83.7%	90.1%	95.0%

Source: College Scorecard college-level data, accessed November 2020. This table displays the percentage of 2014-15 institutions with UNITIDs in 2004, 2009, and 2011 and six-digit OPEIDs in 2004, 2009, and 2011. An institution is considered operating during a data year if its six-digit OPEID was included in that year's College Scorecard data set.

Measurement Windows and Earnings

Timing impacts borrowers' income data used for both debt-to-discretionary earnings and earnings net of debt payments. Average earnings increases over time among borrowers, in the years after they have separated from college, more quickly for public and nonprofit four-year colleges than for community colleges and for-profit colleges.¹²⁰ At public four-year colleges, average post-enrollment income among federally aided students increased 19.1 percent, eight years to ten years after entering college, compared to only a 13.4 percent increase among students enrolled at for-profit colleges (see table 25). On the other hand, debt payments for these calculations do not change over time, and that may allow for a shorter measurement window.

Experts have recommended measurement windows on earnings ranging from three to ten years after graduation.¹²¹ About five years after college may strike a good balance within that range. Analysis of College Scorecard and tax data have indicated that annual earnings of individuals becomes more stable about ten years after starting college, as students progress through college, (in some cases) complete additional schooling, and settle into the workforce.¹²² Five years after exit or graduation could be an appropriate timeframe, given that it roughly corresponds with about ten years after starting college, and that some of the most complete earnings data from the U.S. Census indicate income rises most dramatically in the first five years after graduation and then starts leveling off.¹²³

However, debt-to-discretionary earnings may have an earlier valid measurement window than earnings net of debt payments. Debt-to-discretionary earnings is more sensitive to the amount of debt borrowed, and since this amount does not change over the measurement window for our proposed definition, a shorter measurement window may reliably predict longer-term rates. Earnings net of debt payments also includes a component based on a fixed debt payment, but earnings net of debt payments is primarily driven by earnings (see Appendix II). Earnings net of debt payments likely needs to be measured over a long enough period of time for earnings to stabilize, while a window of roughly two or three years after exit, that is similar to the GE rule, may be adequate for debt-to-discretionary earnings.¹²⁴

TABLE 25

AVERAGE EARNINGS OF STUDENTS IN THE 2004-05 COHORT, BY MEASUREMENT YEAR AND INSTITUTION TYPE				
Institution type	8-year earnings (2012-2013)	10-year earnings (2014-2015)	Growth from 8-year earnings to 10-year earnings	Percent growth from 8-year earnings to 10-year earnings
Public four-year	\$41,900	\$49,800	+ \$7,900	+ 18.8%
Nonprofit four-year	\$44,500	\$53,000	+ \$8,500	+ 19.1%
Public community college	\$31,400	\$36,250	+ \$4,850	+ 15.5%
For-profit	\$31,550	\$35,750	+ \$4,200	+ 13.4%
Total	\$37,300	\$43,850	+ \$6,550	+ 17.6%

Source: College Scorecard college-level data, accessed November 2020. The table displays mean earnings data of federally aided undergraduates who were working and not enrolled eight years after entry and ten years for the 2004-05 cohort. The sample is limited to institutions that have data in both measurement years. Figures rounded to nearest \$50.

Measurement Windows and Loan Repayment

Repayment rate may need to be measured over an even longer period of time, because shorter-term rates may not consistently predict longer-term outcomes, such as full repayment. Borrowers may experience higher variability in employment and loan payments earlier on in repayment that may not reliably indicate the longer-term trajectory of repayment. Borrowers are more likely to accumulate some interest early on in repayment and then start to make progress on paying off loans as their income grows, and if this progress is uneven across different types of borrowers, it could make shorter-term repayment rates less indicative of longer-term outcomes.

Moreover, a repayment rate that is based on negative amortization will take more time to respond to earnings growth and increasing payments made by borrowers, compared to the other two metrics in this paper. Loan amortization depends on past loan payments and accumulation of interest over time so that it will take time for the metric to improve, in contrast with earnings-based metrics that respond to income earned in the most recent year with available data. Another issue is that IDR bases loan payments on income for the prior year, which means that payments during the first year after college are much lower than in subsequent years, because first-year payments are based earnings when students were attending college and likely working less than full-time.¹²⁵

Repayment rates indeed rise steadily with longer measurement windows. Borrower-based rates increase similarly across all college types, with increases typically about ten percentage points from one-year rates to seven-year rates (see table 26). Some experts argue that the stability of relative rankings on repayment rate between different measurement windows suggest measurement windows could be as short as three years.¹²⁶ However, if assessed against an absolute bar, different measurement windows will yield different consequences for colleges. Borrower-based repayment rates at community colleges are typically less than 50 percent in the first year, but eventually rise past that threshold. Repayment rates may also interact with IDR in ways that may make short-term rates less reliable.

TABLE 26

AVERAGE FOR REPAYMENT RATE FOR 2007-08 COHORT, BY MEASUREMENT YEAR AND INSTITUTION TYPE				
Institution type	1-year repayment rate (2008-09)	3-year repayment rate (2010-11)	5-year repayment rate (2012-13)	7-year repayment rate (2014-15)
Public four-year	58.3%	61.9%	66.0%	69.4%
Nonprofit four-year	59.0%	62.9%	67.2%	70.5%
Public community college	41.0%	44.4%	48.2%	51.8%
For-profit	26.9%	29.2%	33.2%	37.5%
Total	45.9%	49.6%	54.0%	57.8%

Source: College Scorecard college-level data, accessed November 2020. This table displays the one-year, three-year, five-year, and seven-year repayment rates at institutions, calculated on a two-year pooled cohort of undergraduates who started repayment on federal loans in FY2007 and FY2008. The sample is limited to institutions that have data in all measurement years.

Even longer-term repayment rates may not reliably gauge progress toward full repayment of student loans. The examples of parent borrowers using IDR had negatively amortizing loans five years after college, but ultimately paid down their full loan balance, plus thousands of dollars of interest in the second decade of repayment, after the borrowers' children grew up, reducing their family sizes and increasing payments set by IDR (see Appendix II).

Conversely, examples of borrowers in IDR show that repayment rate is sensitive to interest rates, and when interest rates are low, short-term repayment rates based on negative amortization may overstate the progress borrowers are making toward paying their loans in full. Under the lower interest rate assumption, the example teacher and both Black borrowers made payments exceeding interest during the first five years of repayment, but still received some forgiveness on accrued interest after 20 years of making required payments in IDR.

In sum, policymakers should consider as short a measurement window as possible that allows just enough time to fairly attribute outcomes to colleges and programs. For the earnings-based metrics, measurement windows between three and five years are likely sufficient. However, repayment rates may need an even longer window to mitigate fluctuations in loan payments in the first few years after college and to account for interactions between loan payments and IDR. The challenge in measuring over a short enough window also speaks to the need for policymakers to calculate debt metrics on exit cohorts, rather than on cohorts of students entering college. In the time students attend college, higher education can change dramatically, and harm caused by emerging bad actors can go unaddressed.

TABLE 27

PLUSES AND MINUSES OF HOW WELL METRICS COVER INSTITUTIONS WITH FEWER BORROWERS		
Debt-to-discretionary earnings	Earnings net of debt payments	Borrower-based repayment rate*
<p>+ Most colleges and virtually all borrowers are likely covered</p> <p>+/- Coverage less complete at for-profit colleges</p> <p>+/- Partially factors in borrowing intensity at colleges</p>	<p>+ Most colleges and virtually all borrowers are likely covered</p> <p>+/- Coverage less complete at for-profit colleges</p> <p>- Does little to account for borrowing intensity at college as a stand alone metric</p>	<p>+ Most colleges and virtually all borrowers are likely covered</p> <p>+/- Coverage less complete at for-profit colleges</p> <p>- Does little to account for borrowing intensity at college as a stand alone metric</p>

* This chart summarizes tradeoffs of a borrower-based repayment rate. Some tradeoffs may differ for other variations of repayment rate, as discussed throughout this report.

CRITERION 6) HOW WELL DOES EACH METRIC COVER (SMALL) INSTITUTIONS AND PROGRAMS?

Debt metric calculations cannot disclose personally identifiable information, and they must also meet statistically acceptable standards for precision. This means debt metrics need to exclude institutions with small numbers of borrowers, with a minimum n-size cutoff likely between 10 and 30 students.¹²⁷ Additionally, policymakers may want to develop an accountability system that takes into consideration how likely students at an institution borrow, and how much they borrow (i.e., “borrowing intensity”).

Metric Coverage and N-size

If calculated at the institution-level, the vast majority of colleges will meet n-size requirements, and statistic precision will likely not pose a barrier in protecting students who attend most institution types. About 9 in 10 public four-year colleges have at least 30 students in cohorts for College Scorecard debt, earnings, and repayment rate, while coverage is somewhat lower for non-profit four-year colleges and community colleges (about 6 in 10 institutions for both). Coverage on these same metrics is lowest at for-profit colleges at 41.2 percent, suggesting that policymakers should consider pooling cohorts of students together, to limit the number for-profit colleges avoiding inclusion in the metrics (see table 28).

Nevertheless, colleges excluded based on n-size typically enroll small numbers of students and the number of borrowers excluded on college-level debt metrics is likely a very small percentage of all borrowers. While information is limited on the number of borrowers who attended colleges with small cohort sizes, analysis of GE suggests coverage of borrowers is likely be much higher than the coverage of colleges. GE covered the vast majority of students at applicable programs, despite excluding about 85 percent of programs due to insufficient n-size requirements.¹²⁸ College Scorecard data suggest college-level metrics would likely have better coverage of borrowers than program-level GE metrics. Even among for-profit colleges, where a substantial fraction of institutions would be excluded, college-level metrics are likely to protect a decent percentage of borrowers.

TABLE 28

PERCENTAGE OF COLLEGES THAT REPORT DEBT AND EARNINGS MEASURES AND HAVE A COHORT N-SIZE OF AT LEAST 30 STUDENTS, MEASURED IN 2014-15, BY INSTITUTION TYPE					
Institution type	Average earnings ten years after entering college	Median cumulative debt after graduation	Five-year repayment rate	Both earnings and debt	Earnings, debt, and repayment rate
Public four-year	93.1%	96.2%	92.9%	90.9%	90.4%
Nonprofit four-year	64.4%	76.3%	73.2%	63.3%	62.9%
Public community college	82.7%	77.1%	71.6%	67.0%	63.0%
For-profit	45.9%	83.7%	63.6%	42.0%	41.2%
Total	63.4%	80.9%	70.8%	57.7%	56.4%
MSI type					
Public HBCU	100.0%	86.0%	86.0%	86.0%	86.0%
Nonprofit HBCU	80.0%	92.0%	86.0%	80.0%	80.0%
Public PBI	94.4%	79.6%	61.1%	75.9%	59.3%
Nonprofit PBI	74.2%	87.1%	77.4%	74.2%	74.2%
Tribal college	79.4%	8.8%	5.9%	8.8%	5.9%
Special focus					
Religious affiliation	67.9%	78.5%	76.2%	67.1%	67.0%

Source: College Scorecard college-level data, accessed November 2020. This table displays mean earnings of federally aided undergraduates working and not enrolled ten years after entry; median debt of undergraduates who left college with federal loans; and five-year repayment rate. Institutions are disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). All data measured in 2014-15.

Metric Coverage and Borrower Intensity

Another concern is how debt metrics apply to colleges that have only a small percentage of students borrowing loans. Policymakers may want to consider how to fairly judge colleges that, while having low borrowing rates, still serve a high share of low-income students who rely on federal grant aid to pay for college. Less than 20 percent of students borrowed federal loans at 53.7 percent of community colleges in 2014-15 (see table 29). Excluding non-borrowers from the metrics and applying n-size requirements may help take borrowing rates into account. For example, students in about 9 in 10 tribal colleges do not take out any federal debt at all, and virtually all these schools would likely be excluded from debt metrics, without any additional exclusions. However, policymakers may need additional solutions that factor in borrowing intensity for colleges with substantial number of borrowers, but low concentrations of borrowing among the overall student body.

TABLE 29

PERCENTAGE OF STUDENTS WHO BORROWED FEDERAL LOANS IN 2014-15, BY INSTITUTION TYPE						
Institution type	Median percentage borrowing loans	Lowest percentage borrowing loans	Highest percentage borrowing loans	% of institutions w/ < 20% borrowing loans	% of institutions w/ < 10% borrowing loans	% of institutions w/o any borrowers
Public four-year	51.8%	0.0%	100.0%	8.5%	5.0%	2.4%
Nonprofit four-year	64.1%	0.0%	98.6%	10.6%	8.9%	7.4%
Public community college	17.2%	0.0%	100.0%	53.7%	39.9%	26.5%
For-profit	67.1%	0.0%	100.0%	9.3%	7.6%	6.3%
Total	58.3%	0.0%	100.0%	18.3%	14.2%	10.3%
MSI type						
Public HBCU	72.2%	0.0%	89.7%	16.0%	16.0%	14.0%
Nonprofit HBCU	86.7%	0.0%	98.3%	2.1%	2.1%	2.1%
Public PBI	24.2%	0.0%	87.0%	37.0%	29.6%	29.6%
Nonprofit PBI	74.4%	0.0%	94.7%	5.0%	5.0%	2.5%
Tribal college	0.0%	0.0%	48.6%	91.2%	91.2%	91.2%
Special focus						
Religious affiliation	66.7%	0.0%	98.6%	8.7%	7.9%	6.6%

Source: College Scorecard college-level data, accessed November 2020. This table displays the percent of all undergraduates receiving a federal student loan during academic year 2013-14 (reported through IPEDS). Institutions are disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification).

To some extent, the metrics in this paper consider the intensity of borrowing, in that they are influenced by borrowing amounts that may correlate with, and proxy for, how many students take on debt and how much debt borrowers typically accumulate at each college (or program). Debt-to-discretionary earnings is strongly influenced by debt amounts and its use may benefit colleges where students are relatively less burdened by debt. A dollar-based repayment rate may also help mitigate consequences for colleges with less intense borrowing, by weighing the outcomes of students with more debt more heavily. However, earnings net of debt payments and borrower-based repayment rates are less influenced by borrowing amounts and less likely to mitigate consequence for colleges with less student debt. None of these metrics, by themselves, would precisely take borrowing intensity into account.

Policymakers could also consider a set of rules that exclude colleges with low shares of borrowers from metric calculations or sanctions. A minimal threshold for the share of borrowers could establish that borrower outcomes are reasonably representative of completion outcomes and credential quality at the college (or program) as a whole. Another option is to adjust the metrics based on intensity of borrowing among the full student body.¹²⁹ The latter approach, though, would likely disproportionately impact HBCUs and colleges serving greater shares of Black students, who are more reliant on student debt to pay for college. Some may argue it that

it is fairer to focus an accountability system on student debt outcomes and borrower financial health, rather than how likely it is for students to borrow while in college. Borrowing rates may be overly influenced by disparities in institutional resources and racial wealth gaps—that could add noise to an indicator of borrower financial health.

CRITERION 7) WHAT ARE THE KEY IMPLEMENTATION CHALLENGES?

There are two primary challenges in using the debt metrics for purposes of accountability: 1) having the authority and operational capability to extract data for the metrics and 2) developing a framework and thresholds that have a solid rationale and mitigate adverse, disparate, and unfair impacts on colleges, as well as on underrepresented students of color and low-income students. Finding metrics that achieve both these aims is challenging, but critical to being able to use debt metrics to trigger meaningful sanctions.

TABLE 30

PLUSES AND MINUSES OF OBTAINING AND VALIDATING DATA FOR EACH METRIC		
Debt-to-discretionary earnings	Earnings net of debt payments	Borrower-based repayment rate*
<ul style="list-style-type: none"> + GE rule established and implemented a framework and thresholds – Challenges to ED accessing to SSA or other earnings data – Questions about how well federal tax data reflect actual employment outcomes and questions about the earnings appeals process 	<ul style="list-style-type: none"> +/- Similarity to established and previously implemented GE metrics – Challenges to ED accessing to SSA or other earnings data – Questions about how well federal tax data reflect actual employment outcomes and questions about the earnings appeals process 	<ul style="list-style-type: none"> + Using the Department’s own data avoids interagency data exchanges – Evidence base to support a specific threshold is thin

* This chart summarizes tradeoffs of a borrower-based repayment rate. Some tradeoffs may differ for other variations of repayment rate, as discussed throughout this report.

Challenges Obtaining Data to Calculate Metrics

Social Security Administration (SSA) earnings data are key to calculating any debt metrics that incorporate earnings. Previous legal challenges to the 2014 GE rule highlight how complex federal interagency data sharing can be, and special care will need to be taken to ensure that ED can successfully work with other agencies to secure and properly use earnings data.¹³⁰ The U.S. Department of Education can also consider using other sources of earnings data, such as data from the Internal Revenue Service or from a state agency data exchange, if necessary. However, whatever the source, policymakers need to put in place interagency agreements that secure access to comprehensive and reliable earnings data of former students. Agreements will need to specify the purpose and use of these data, as well as procedures for complying with privacy laws and data security standards. It may also be helpful for Congress to clarify that federal agencies with earnings data have the authority to share those data, and that evaluation of colleges and programs is a legitimate use of the data.

Another operational challenge for an earnings-based metric is that due process requirements under the Administrative Procedures Act (APA) require the Department to provide colleges with an appeals process for earnings data, when college believe SSA or other federal data do not sufficiently reflect the income of their former students. Some students may not pay federal taxes on their income and skew earnings calculations downward for their college or program. The American Association of Cosmetology Schools (AACS), brought a lawsuit in 2017, arguing that SSA data do not accurately reflect the standing of cosmetology graduates because many do not report their income for tax purposes. While GE allowed colleges to submit alternative earnings data, a federal court held that the alternative earnings process included procedural requirements (such as a 50% response rate to surveys) that were arbitrary and too stringent.¹³¹ For any earnings-based metric, policymakers need to find an effective earnings appeals process that includes guardrails against colleges gaming the metric with self-reported measures that are inflated or inaccurate.

Repayment rate does not present these same implementation challenges related to securing and validating data. Calculating rates only requires data on student loans that the Department already maintains, with the notable exception of non-federal loans (see page 41).

Challenges Setting a Minimum Standard

Setting thresholds may be the most challenging aspect of developing and implementing any debt metric. A standard that is too low is not meaningful, one that is too high is likely to not be fair and potentially create harmful unintended consequences.¹³² Additionally, a threshold needs to be based on a solid rationale. Debt-to-discretionary earnings has a conceptual framework and thresholds that were vetted and implemented already via the GE rule.¹³³ Earnings net of debt payments is an untested metric, but it may be relatively easy to set a threshold based on a level of income after debt payments that is so low that it does not allow for a livable income, or that does not equate to what a student would make without attending college. For example, the metric could indicate whether an institution is making its students worse off than a typical high school graduate who has not attended college. GE also points to 150 percent of the Federal Poverty Line as another promising threshold that could set a minimum standard on earnings net of debt payment. New data released through College Scorecard show that if using 150 percent of the Federal Poverty Line as the minimum threshold, the majority of graduates at about 1 in 4 for-profit colleges did not meet this bar within three years of graduation (see Appendix III).

In contrast, policymakers may encounter greater obstacles setting thresholds for repayment rates due to a shorter history of the calculation and a thinner research base to underpin it. Thresholds such as 50 percent, or for a cohort-based metric, a break-even point at which loan balances decline over time, may present the most compelling rational basis for a repayment rate threshold.

In any case, the Department should collect necessary data, calculate metrics, and analyze their effects, before tying them to consequences. In particular, more information is needed about the benefits and harm reduction associated with debt metrics, along with unfair impacts on students that typically have less access to higher education, such as underrepresented students of color and low-income students. Currently, repayment rate is the only metric in this paper that has publicly available data for the full universe of Title IV participating colleges. Debt-to-discretionary earnings and earnings net of debt payments have data available from GE, but those data do not cover many programs at public and nonprofit four-year colleges, and they are relatively

outdated. A push for better data and more openness on the part of policymakers would help to support a policy framework for debt metrics to complement CDR and existing accountability measures.

MITIGATING THE IMPACT OF COLLEGE RESOURCE INEQUITIES ON METRICS

This report has examined to what extent debt metrics may unintentionally harm underrepresented students of color and low-income students, and we have found that broader social disparities outside of the control of colleges may influence some metrics more than others.

To help mitigate this, policymakers could invest additional resources into colleges that need help supporting students through to completion, improving credential quality, lowering prices, and strengthening grant and scholarship aid. Nationally, schools receiving the least funding and serving the bulk of underrepresented students of color have the lowest rates of success. A growing body of evidence points to the critical role institutional resources play in supporting positive student outcomes. Increased spending—wisely invested—increases student success. Tuition, room, board, books, and other mandatory fees all contribute to the rising cost of attending college. While not all strategies to increase completion come with a big price tag, less selective colleges are unlikely to be able to strengthen the academic and nonacademic supports that are key to driving student success without additional investment. *For more information, check out [TICAS' 2019 report, Dire Disparities](#).*

Policymakers should also consider disaggregating debt metrics by key subgroups of borrowers, such as Pell students (typically from families making less than \$40,000), graduates and non-completers, and dependent and independent students. Debt metrics vary across these groups, and data on different kinds of students could illuminate equity gaps within colleges, help policymakers develop thresholds on debt metrics, and signal to colleges how they could move the dial on loan outcomes for all students.

A different approach is to hold colleges to a relative standard of performance that compares like-colleges (or programs) to each other, or adjusts metrics for student demographics. However, this does not align with the conceptual approach of this paper, to protect against loan outcomes that do not meet a minimum standard, regardless of what kinds of students the college enrolls or who the students are. There are also practical challenges in pursuing this strategy, in that loan data on students' racial and ethnic identifies are not comprehensively available.¹³⁴ Even with better data, methodologies that adjust metrics based on student demographics raise concerns about statistical validity, and adjusting earnings for students with little employment history is particularly fraught.¹³⁵

USING METRICS TO TRIGGER SANCTIONS

PROMISING THRESHOLDS

An accountability system needs metric thresholds to draw the line between outcomes that are adequate and bad outcomes that warrant sanctions for colleges (or programs), such as loss of Title IV eligibility. This report does not recommend a single metric or threshold, but there are a few promising approaches that policymakers should consider in using debt metrics.

The debt-to-discretionary earnings rate of 20 percent used for Gainful Employment (GE) is a good starting point for that metric.¹³⁶ This threshold is supported by expert opinion and was already successfully implemented at one time. Comprehensive data on debt-to-discretionary earnings beyond GE programs are not available, but institutional data on earnings for federally aided students and debt of borrowers suggest this standard could subject a substantial fraction of HBCUs and MSIs to sanctions because of relatively high debt of graduates and modest earnings after college. Limiting the metric to completers only, as was the case for GE, helps because many of these four-year colleges provide credentials with decent financial payoff, among the minority of students who graduate. Policymakers should also consider allowing colleges, near the borderline, multiple years to improve performance, such as allowing colleges with debt-to-discretionary earnings rates between 20 percent and 30 percent a longer period to improve.

For earnings net of debt payments, policymakers should consider setting a standard that borrowers should make no less than the typical income of a high school graduate (roughly \$28,000) after expected debt payments. This threshold is conceptually appealing because earnings of high school graduates may roughly gauge what students would have made without going to college. On the other hand, this threshold may be impractically stringent. Students frequently make less than this amount after attending college, especially among those who attend open access institutions (see pages 32-36). Still more colleges may not meet this threshold because the metric would subtract debt payments from earnings, before assessing the threshold, and borrowers who do not report taxable income may further pull down earnings figures.

Alternatively, policymakers should consider adjusting the threshold based on regional variation in earnings, to more closely reflect whether credentials payoff, relative to opportunities students would otherwise have available without attending college. Most programs that fail a standard based on national averages of high school graduate earnings pass the same standard based on state averages, suggesting a regionally adjusted threshold would be less stringent.¹³⁷

Policymakers should consider the 150 percent of the Federal Poverty Line as a lower threshold for earnings net of debt payments that focuses more on the very low performing colleges (or programs). A lower threshold could better consider that earnings grows considerably well after students enter the workforce, particularly among bachelor's degree graduates, and that some leeway should be afforded for students who voluntarily work less than full-time (e.g., missionary work), geographic differences in wages and cost of living, and other idiosyncratic factors. A multiple of the Federal Poverty Line may also be a good threshold because it could test whether a borrower makes enough after college to make student debt payments, without eating into personal living necessities. This threshold would be based on the Federal Poverty Line for a single person (family size of one), rather than varying thresholds based on family sizes of students. College should be held to a consistent, easily understood threshold that is not overly influenced by demographics outside colleges' control, such as age and family size.

This report raises serious concerns that repayment rate is overly influenced by broader social inequities outside the control of colleges and may unfairly identify colleges, such as HBCUs, that serve very high shares of Black students, as having the worse loan repayment outcomes. Hence, identifying a minimum standard for repayment rate that does not potentially undermine meaningful opportunities for students is challenging. Policymakers should consider setting thresholds on repayment rate that could identify colleges, at the upper end of student loan outcomes, where relatively few students struggle making payments on student debt. This could function as a trigger to reward colleges meeting the threshold or as a way for colleges to “appeal” against earnings-based metrics that establish a minimum standard, similar to the use of repayment rate for the 2011 GE rule.¹³⁸ This may help resolve issues colleges may have that federal earnings data understate the financial well-being of some students who report little taxable income. Policymakers should consider 35 percent and 50 percent thresholds that were considered throughout the negotiated rulemaking process for GE, and that this report’s analysis indicates corresponds with outcomes typically meeting the minimum standards discussed for the other two debt metrics (see next section).

FITTING THE METRICS TOGETHER

It is hard for one single debt metric to achieve all goals of an accountability system, or work well in all instances, and for all kinds of institutions and students. The debt metrics highlighted in this paper are meant to complement and strengthen existing protections for students provided by the official Cohort Default Rate (CDR) and other existing safeguards. Maintaining CDR as a baseline of acceptable performance on top of these metrics is critical, since it is well-established that default is an extremely harmful outcome for students, and that CDR has pushed some colleges to improve student success efforts and financial aid practices.¹³⁹ The metrics discussed in this paper may work well with CDR, in that they appear related to borrower struggles and default, and at the same time, differ substantially enough from CDR rates that they likely capture a broader set of adverse loan outcomes that do not quickly lead to default after college.

Average earnings of federally aided students ten years after entry into college, an important component of debt-to-discretionary earnings and earnings net of debt metrics discussed in this paper, strongly correlates with CDR rates. Among colleges with CDRs below 20 percent, 3,667 in 4,680 (78.4%) had average earnings great than or equal to \$28,000 in 2014-15. At the same time, 507 (10.8%) of colleges with CDRs below 20 percent had average earnings less than \$24,120 (200% of the Federal Poverty Line in 2017 dollars), indicating that earnings-based debt metrics may detect problematic outcomes that are not already reflected in CDR (see table 31).

Similarly, repayment rates correlate with CDRs, but also may indicate that some low-CDR institutions have a substantial share of students in negative amortization. Only 2,484 in 4,879 (50.9%) of institutions with CDRs less than 20 percent had a five-year repayment rate greater than 50 percent (see table 32). Although many borrowers in negative amortization may eventually make steadier progress on repayment, these data show that repayment rate is a much broader indicator of borrower struggles than CDR. Repayment rate is likely better suited to signal which colleges (or programs) are on the upper end performance, rather than a metric that benchmarks colleges against a minimum standard.

TABLE 31

NUMBER OF INSTITUTIONS BY AVERAGE EARNINGS TEN YEARS AFTER ENTRY INTO COLLEGE (2014-15) AND THREE-YEAR COHORT DEFAULT RATE (2014)						
	Average earnings of students who attended institution					
Cohort default rate	< \$18,090*	\$18,090- 24,119*	\$24,120- 27,999*	\$28,000 - 34,999*	≥ 35,000	Total
≥ 30%	3	24	22	21	4	121
25-29%	3	27	50	74	32	237
20-24%	5	104	111	273	1620	764
10-19%	28	305	399	565	1,193	2,846
< 10%	18	156	107	197	1,712	2,823
Total	88	746	792	1,290	3,159	7,766

Source: College Scorecard college-level data, accessed November 2020. The table displays institutional counts based on mean earnings for federally aided undergraduates and institutional cohort default rates for borrowers. Mean earnings were calculated on a two-year pooled cohort of undergraduates who received federal student aid and separated from college during award years 2003-04 and 2004-05. Cohort default rates were calculated for the 2012 cohort of undergraduate and graduate borrowers, who were measured in 2014. Dollars are inflation-adjusted to 2017. Totals include colleges that did not report data.

* The thresholds for earnings are based on the 2017 Federal Poverty Line for a single adult and typical earnings of a high school graduate: \$18,090 = 150% Federal Poverty Line in 2017; \$24,120 = 200% of the Federal Poverty Line in 2017; and \$28,000 = income of average high school graduate.

TABLE 32

NUMBER OF INSTITUTIONS BY FIVE-YEAR REPAYMENT RATE (2014-15) AND THREE-YEAR COHORT DEFAULT RATE (2014)						
	Repayment Rate					
Cohort default rate	< 25%	25-29%	30-34%	35-49%	≥ 50%	Total
≥ 30%	24	7	12	18	2	121
25-29%	48	34	33	79	14	237
20-24%	139	94	96	288	78	764
10-19%	261	286	512	892	685	2,846
< 10%	58	50	80	274	1,799	2,823
Total	577	484	747	1,570	2,589	7,766

Source: College Scorecard college-level data, accessed November 2020. The table displays institutional counts based on the fraction of repayment cohort who are not in default with loan balances that have declined five years since entering repayment and institutional cohort default rates. The repayment cohort was calculated on a two-year pooled cohort of undergraduates who started repayment on federal loans in FY2009 and FY2010. Cohort default rates were calculated for the 2012 cohort of undergraduate and graduate students, who were measured in 2014. Totals include colleges that did not report data.

Pairing Earnings Net of Debt Payments with Repayment Rate

Policymakers should consider pairing repayment rates with earnings net of debt payments (plus, existing CDRs) to provide colleges an alternative path to avoiding sanctions when they do not pass the earnings-based metric. As stated in the thresholds discussion, this could help mitigate concerns among colleges whose students have lower earnings for reasons that do not reflect on institutional performance.

The 50 percent threshold for repayment rate may pair well with a lower threshold for earnings net of debt payments, such as the 150 percent of the Federal Poverty Line or typical earnings of high school graduates. Among colleges with repayment rates over 50 percent, 2,038 in 2,407 (84.7%) had average earnings, among federally aided students ten years after starting college, of at least \$35,000—an earnings benchmark cited by experts as a marker of good jobs—suggesting a 50 percent repayment rate is an affirmative indicator of borrower financial health. Conversely, only 50 (2.1%) colleges with rates over 50 percent had students who typically earned less than \$24,120 (see table 33).¹⁴⁰ Colleges like these, that have relatively strong repayment outcomes, could benefit from having a repayment rate standard as an alternative way to avoid sanctions (or “appeal” other metrics), under an accountability regime that focuses on earnings-based metrics.

Policymakers could also consider pairing a 50 percent threshold on repayment rate with an earnings net of debt payments threshold based on high school graduate earnings within the same state, since geographic variation in earnings greatly reduces failure rates in higher poverty states, and may set a reasonable minimum bar.¹⁴¹ If a college were to fail both of these tests, it would indicate that their borrowers likely make less than they would without a college degree *and* that the majority of them are unable to reduce their loan balance over time. A 35 percent threshold could also pair well with a higher threshold on earnings net of debt payments, such as the typical earnings of high school graduates nationally.

Combining Metrics with Debt-to-Discretionary Earnings

As a second-best option, college-level debt-to-discretionary earnings ratios are worth consideration as a way to strengthen CDRs, signaling when credentials offer little payoff to graduates who have relatively high debt burdens, but who may not immediately default, as they experience struggles keeping up with payments. However, as discussed in criterion 3, one of the main shortcomings of debt-to-discretionary earnings is that it does not include non-completers and may not protect against bad outcomes when borrowing amounts are relatively low.

Policymakers looking to use debt-to-discretionary earnings should consider ways to address this concern, such as pairing debt-to-discretionary earnings with additional metrics that help guard against harm at colleges (or programs), with many students who leave with small debt amounts but no degree. The existing CDR by itself may sufficiently hold colleges to account for bad loan outcomes among dropouts, since short-term default rates remain high among this group.¹⁴² For program-level accountability, policymakers could also consider supplementing the metric (and the existing CDR) with a program-level CDR metric, with analogous methodology and thresholds as the institutional CDR.

TABLE 33

NUMBER OF INSTITUTIONS BY AVERAGE EARNINGS TEN YEARS AFTER ENTRY INTO COLLEGE AND FIVE-YEAR REPAYMENT RATE FOR 2014-15						
	Average earnings of students who attended institution					
Repayment rate	< \$18,090*	\$18,090-24,119*	\$24,120-27,999*	\$28,000 - 34,999*	≥ \$35,000	Total
< 25%	19	152	231	118	20	577
25-29%	5	119	108	154	58	484
30-34%	3	89	64	154	392	747
35-49%	14	188	214	455	559	1,570
≥ 50%	9	41	77	242	2,038	2,589
Total	88	746	792	1,290	3,159	7,766

Source: College Scorecard college-level data, accessed November 2020. The table displays institutional counts based on mean earnings for federally aided undergraduates and the fraction of repayment cohort who are not in default with loan balances that have declined five years since entering repayment. Mean earnings were calculated on a two-year pooled cohort of undergraduates who received federal student aid and separated from college during award years 2003-04 and 2004-05. Dollars are inflation-adjusted to 2017. The repayment cohort was calculated on a two-year pooled cohort of undergraduates who started repayment on federal loans in FY2009 and FY2010. Totals include colleges that did not report data.

* The thresholds for earnings are based on the 2017 Federal Poverty Line for a single adult and typical earnings of a high school graduate: \$18,090 = 150% of the Federal Poverty Line in 2017; \$24,120 = 200% of the Federal Poverty Line in 2017; and \$28,000 = income of average high school graduate.

While this paper has argued that repayment rates likely do not lend themselves to setting a fair minimum standard for student loan outcomes, policymakers could also consider using repayment rates as an alternative path to avoiding sanctions, particularly when there are concerns about the validity of federal earnings data. Since our recommended threshold for debt-to-discretionary earnings (20%) sets a fairly high bar, this metric may pair well with a lower threshold using repayment rate, such as 35 percent. Colleges or programs would face sanctions if they fail *both* the debt-to-discretionary earnings test *and* repayment rate—on top of sections triggered by CDR.

RECOMMENDATIONS

While college remains an essential path to economic security and a better life, it should not come with as much economic risk as it currently does. Too often, students taking out student loans are left worse off than if they had never gone to college at all. Debt burdens and adverse outcomes fall most heavily on low-income students and students of color, reinforcing inequities.

Accountability rules like Cohort Default Rates (CDR) and the recently repealed Gainful Employment (GE) rule define minimum standards to identify those colleges or programs that routinely leave students worse off. Not only do these rules protect students from the worst-performing colleges, but evidence suggests both, that colleges improve the value they offer students in response to these standards and that, among colleges that do not improve, students have access to better options at alternate programs and colleges. Now however, policymakers need new ways to hold colleges accountable to complement CDR.

This paper explores three debt metrics that could strengthen the existing accountability system: debt to discretionary earnings ratios, earnings net of debt payments thresholds, and repayment rates. Each should be considered for use alongside the existing CDR. These metrics seek to set a minimum standard where of students are left better off after borrowing to attend college, are supported by a range of experts in the field, and are operationally viable. However, each has its own strengths and weaknesses discussed in this report.

We recommend that policymakers:

- **Hold colleges accountable for borrowers' earnings after expected debt payments.** Students enroll in college for many reasons, and not all programs are intended to confer economic returns. However, if a program is financed with student loans, it should at least leave most borrowers with a minimum level of economic security.
- **Set an earnings threshold that measures a minimum level of economic success.** The threshold on earnings net of debt payments could be set at 150 percent of the Federal Poverty Line (\$19,140 for a single individual in 2020) or the typical earnings of a young worker with a high school diploma. Thresholds could be set on a national average of high school earnings (\$28,000) or in the college's state averages. A multiple of the Federal Poverty Line would test whether a borrower makes enough after college to make expected debt student debt payments, without eating into personal living necessities. Alternatively, borrowers making less than a typical high school graduate (with no college degree or certificate) would be likely worse off than if they had not attended college.
- **Consider establishing an alternative eligibility measure for federal student aid, such as repayment rate.** Earnings net of debt payments pairs well with repayment rate. The repayment rate would provide an initial filter that would allow institutions, that have strong loan payment outcomes, to pass the accountability standard, without any adverse sanctions. Earnings net of debt payments would set a minimum standard for colleges that do not pass the repayment rate threshold. These metrics work well together since they both can evaluate the same set of borrowers, respectively, including both completers and non-completers. Fifty percent or 35 percent may be good thresholds for a borrower-based repayment rate to identify colleges with adequate outcomes, that they do not need an assessment on earnings net of debt payments.¹⁴³ Colleges would need to pass CDR and existing eligibility standards as well.

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- **Ensure earnings data are verified.** Colleges have an opportunity to verify the calculations of CDR, but privacy laws forbid the same process from being used to verify earnings. One federal court has ruled that using tax data to measure earnings did not consider the fact that some colleges produce graduates who are disproportionately likely to understate their income on their tax returns. Policymakers need to use the most accurate and comprehensive earnings data possible, and develop an earnings appeals process that allows for reasonable due process, but also ensures institutions cannot game earnings measures by submitting inflated and inaccurate income data for their students, particularly if the accountability framework does not include an alternative mechanism like a repayment rate.
 - **Consider using both institution-level and program-level metrics.** Program-level metrics may help differentiate outcomes within colleges and avoid all or nothing accountability. However, they may raise n-size concerns. Policymakers should consider grouping similar programs, or calculating metrics that combine programs in the same credential level. COVID-19 has also led to a surge in online course-taking, and policymakers should consider ways to separate exclusively online and hybrid programs from other programs in the same college.
 - **Take changes in economic conditions into account.** Debt metrics should fairly assess college performance during both good and bad economic times. Economic conditions can influence all three debt metrics, and they are particularly important for debt-to-discretionary earnings and repayment rate because of sensitivity to changes in debt amounts and interest rates on top of changes in post-enrollment earnings. Rolling averages can help and their use is well-established from GE rulemaking. Adjustments to metric rates, or thresholds, based on changing macroeconomic conditions and interest rates are another option. For instance, earnings net of debt payments thresholds could be adjusted based on typical earnings in states or regions that colleges serve.
 - **Assess metrics over the shortest time period possible to allow for valid measurement of performance.** Policymakers need to ensure that measurement occurs far enough into repayment that results are stable and reflect current and likely longer-term risk, but also soon enough that performance is reasonably attributed to the actions of colleges or programs. This is especially difficult to achieve for repayment rate because it, on average, increases steadily over time, and short-term rates may be less reliable for borrowers enrolled in IDR. All debt metrics should be calculated on exit cohorts, not initial enrollment. The universe of institutions can change too quickly over time for metrics based on initial enrollment to effectively guard against poor outcomes at newly formed or reorganized colleges (or programs). Policymakers should also consider measuring earnings net of debt payments and repayment rate about five years after leaving college. In contrast, a shorter measurement window may be sufficient for a debt-to-discretionary earnings metric.
 - **Improve access to aggregate and student-level data.** Resolve issues with sharing data across government agencies, to more effectively develop and implement metrics and thresholds. Better data can help to highlight the benefits and harm reduction associated with debt metrics and mitigate unintended consequences. The U.S. Department of Education should collect necessary data, calculate metrics, and analyze their effects, before tying them to consequences. Data should allow for the disaggregation of debt

metric outcomes by program, including ways to separate exclusively online and hybrid programs. Congress should require the federal government to collect private student loan data directly from lenders to ensure a complete record of student debt. Congress should also clarify that federal agencies with earnings data have the authority to share those data and that evaluation of colleges and programs is a legitimate use of those data.

APPENDIX I: METRICS NOT FEATURED IN THIS REPORT

We considered, and decided not to include several metrics. Among these are variations of our proposed metrics, including annual debt-to-earnings, earnings net of college costs (or tuition), and dollar- and volume-based repayment rates (discussed in main paper). These alternatives are worth consideration, particularly as data availability improves. We also ruled out estimating a return-on-investment of attending college that compares post-enrollment earnings to pre-enrollment earnings or some other counterfactual.¹⁴⁴ This has conceptual appeal for testing whether students are “worse off” after attending college. However, there are practical reasons this is not viable for accountability. Many students attend college before they are old enough to work full-time so that it is hard to reliably compare pre- and post-college earnings across all colleges. Moreover, such an approach is not operationally feasible if the U.S. Department of Education does not have access to individual-level data on students’ pre- and post-college earnings. Similarly, we rule out value-added models that compare the earnings of students with similar pre-enrollment backgrounds and demographics (see page 56).

Loan delinquency is not featured in this report, primarily because it is a close offshoot of default rates, and the goal of this paper is to identify additional metrics that can complement CDR. Using delinquency as a measure also has similar limitations as CDR, especially for students in forbearance or who choose an IDR plan—which helps avoid both default and delinquency. Existing research and data on college- or program-level delinquency rates are also limited. However, it is important to note that short-term delinquency rates may be worth considering as a temporary backstop as default rates remain low, in the immediate years following COVID-19, due to the emergency pause on student debt payments.

Repayment rates could also measure colleges against a more ambitious bar for what it means to achieve repayment success, than reducing loan balances by at least \$1.¹⁴⁵ Developing a metric that applies a tougher standard than negative amortization may have merit, but such a metric would likely hold colleges to a bar that goes well beyond a minimum standard for triggering serious consequences, such as loss of Title IV eligibility. About half of undergraduate borrowers do not even pay \$1 off their loan principle, five years after college, based on TICAS calculations using College Scorecard data.

This report also does not feature loan outcome measures that are based on loan indicators other than default or changes in loan balances. Some researchers have developed measures of borrower difficulty based on whether students make a certain number of required debt payments (“on-time payments”), or miss loan student payments, or secure temporary loan relief through deferments or forbearances.¹⁴⁶ Although this approach has value in better understanding broad trends, it has several serious drawbacks. First, it lacks conceptual clarity, in that it is based on many value judgments about what kinds of temporary loan relief should count as adverse outcomes for students. Defining outcomes that are good, bad, or neither is made even more difficult by changes in policies and regulations that impact loan statuses. Second, setting a defensible threshold would be challenging, given the complexity of the methodology and lack of a readily apparent standard based on research or expertise. Third, a metric focused on on-time payments may not work for colleges (or programs) where students use IDR as a safety net. Borrowers with extremely low-incomes qualify for zero-dollar payments in IDR and could count as making “on-time” payments without making any payments at all. Policymakers would have to decide how to treat such outcomes. Finally, such a metric would likely not lend itself to including private, non-federal loans, since that would introduce still more possible loan statuses and payment options that policymakers would need to categorize as good or bad.

APPENDIX II: ANALYSIS OF SEVEN EXAMPLE BORROWERS

To understand better each metric's validity as a measure of student debt outcomes, as well as potential unintended consequences for key student populations, we model our metrics against seven example student-borrowers who represent a range of experiences. While these examples do not comprehensively cover all possible outcomes or populations of borrowers, they provide some key insights into how each metric works. These examples shed light on the factors that influence each metric and to what extent each metric points to different borrower scenarios as good or bad outcomes.

- 1) **Bachelor's degree graduate:** Bachelor's degree graduates are typically better positioned than others to repay their debt, as the credential generally holds labor market value that facilitates student loan repayment.¹⁴⁷ We would expect a valid debt metric to count a bachelor's degree graduate with a typical amount of debt and post-college earnings as having a successful outcome.
 - Amount of debt: \$29,000
 - Year 1 income: \$37,000
 - No children
- 2) **Teacher (bachelor's degree graduate):** Teaching is one of the most common occupations for bachelor's degree graduates, with over four million people teaching nationally.¹⁴⁸ Although teaching is a socially valuable occupation and typically requires at least a bachelor's degree, teachers who are just a few years out from school make less than similarly educated peers. This example tests how each debt metric treats a borrower who successfully graduates, but pursues a career with modest economic benefits.
 - Amount of debt: \$28,000
 - Year 1 income: \$31,000
 - No children
- 3) **Black bachelor's degree graduate:** Although borrowers who graduated from college are better positioned to pay their loans, research shows some graduates struggle with payments for reasons that may not be within the control of institutions that served them. Black graduates at four-year colleges are a key example because disparities, throughout the education pipeline and broader society, contribute to Black borrowers leaving college with more student debt and experiencing greater challenges in making payments.¹⁴⁹ This example helps gauge to what extent a college could meet a minimum standard on each metric if it supports a Black student through to graduation and provides a quality credential—or to what extent will racial disparities overly influence the metric.
 - Amount of debt: \$36,000
 - Year 1 income: \$36,000
 - No children
- 4) **Black non-completer (attended four-year college):**¹⁵⁰ Conversely, this example focuses on a Black student who attended college and left without completing a bachelor's degree. Black students who leave college without a degree experience extremely high rates of long-term default¹⁵¹ and represent about 3 in 5 Black students who seek a bachelor's degree.¹⁵² This case tests to what extent each metric could work effectively to push colleges to better support Black borrowers through to graduation.
 - Amount of debt: \$16,000
 - Year 1 income: \$26,000
 - No children

5) Parent with two children (bachelor's degree graduate): Parents represent about one-quarter of all undergraduates and as independent students, parents who graduate with debt are likely to have more of it to pay back.¹⁵³ Yet, a quality college credential can serve as a springboard to improved economic opportunities for student-parents and their children, without leading to bad student loan outcomes. This example shows to what extent each metric may count an older, independent student, who successfully completes a college degree, as a positive outcome.

- Amount of debt: \$37,000
- Year 1 income: \$45,000
- Children: A twelve-year-old and an eight-year-old at time of graduation

6) Parent with one child (associate's degree graduate at for-profit): Conversely, this example gauges to what extent each metric counts a parent who graduates with less debt than a typical bachelor's degree graduate, but also with a credential that has limited value, as an adverse outcome.

- Amount of debt: \$24,000
- Year 1 income: \$31,000
- Children: A one-year-old at time of graduation

7) Certificate completer: The last example accounts for the concentration of delinquency and default among borrowers who leave college with a lower quality credential, such as a certificate. Although certificate completers typically leave schools with small amounts of debt, they are about as likely as non-completers to experience delinquency and default.¹⁵⁴ This example helps examine how each metric treats cases in which borrowers have relatively little debt and yet still experience bad outcomes due to a lower quality credential.

- Amount of debt: \$11,000
- Year 1 income: \$28,000
- No children

METHODOLOGY

For each example borrower, we model their debt-to-discretionary earnings and earnings net of debt payments three years after entering repayment. We also model negative amortization for these example borrowers, and examine whether payments made in IDR would likely be large enough to reduce each borrower's outstanding loan balance five years into repayment and count positively towards a repayment rate that is based on negative amortization. Although we focus on negative amortization five years into repayment, we note when evaluating a longer window of measurement changes the directionality of the borrower's loan balance due to changes in earnings or family size.

We make educated assumptions about how much federal student debt each example student borrows for their undergraduate studies, how much annualized income they earn after college, and the interest rate on their loans.¹⁵⁵ The amount of debt and earnings after college is based on nationally representative survey data from the U.S. Department of Education.¹⁵⁶ We model expected debt payments using a low-interest scenario of 2.75 percent (undergraduate federal Stafford loans disbursed during the 2020-21 award year) and a high-interest scenario of 6.8 percent (2012-13 award year), based on the range of recent interest rates for undergraduate federal student loans.

Debt-to-discretionary earnings and earnings net of debt payments are modeled based on debt and post-college income data for *all federal borrowers*, with loan payments calculated based on amortization specified in the 2014 Gainful Employment (GE) rule.¹⁵⁷ In contrast, we examine negative amortization for example borrowers based on the debt levels and earnings of *IDR borrowers only*, since this is the only group of borrowers who can successfully make all required loan payments, and still experience negative amortization when IDR caps required payments below accruing interest.¹⁵⁸ Although borrowers' earnings and debt amounts can influence actual payment trajectories of non-IDR borrowers, as well as repayment rates at institutions attended by these borrowers, these impacts only indirectly change loan balances as a result of borrower behavior that cannot be modeled through borrower examples. To gain a complete picture of what influences repayment rate for all borrowers, we also examine actual repayment rate data from College Scorecard that include both IDR and non-IDR borrowers.

Debt-to-Discretionary Earnings Ratio

The seven borrower examples show how the amount of debt borrowed, annual income, and interest rate all substantially affect debt-to-discretionary earnings. Borrowers with higher incomes have lower debt-to-discretionary earnings ratios in these examples. The typical bachelor's degree graduate and the parent bachelor's degree graduate both have the two highest incomes and the two lowest debt-to-discretionary earnings ratios at 11.5 and 10.3 at the lower interest rate of 2.75 percent, respectively.

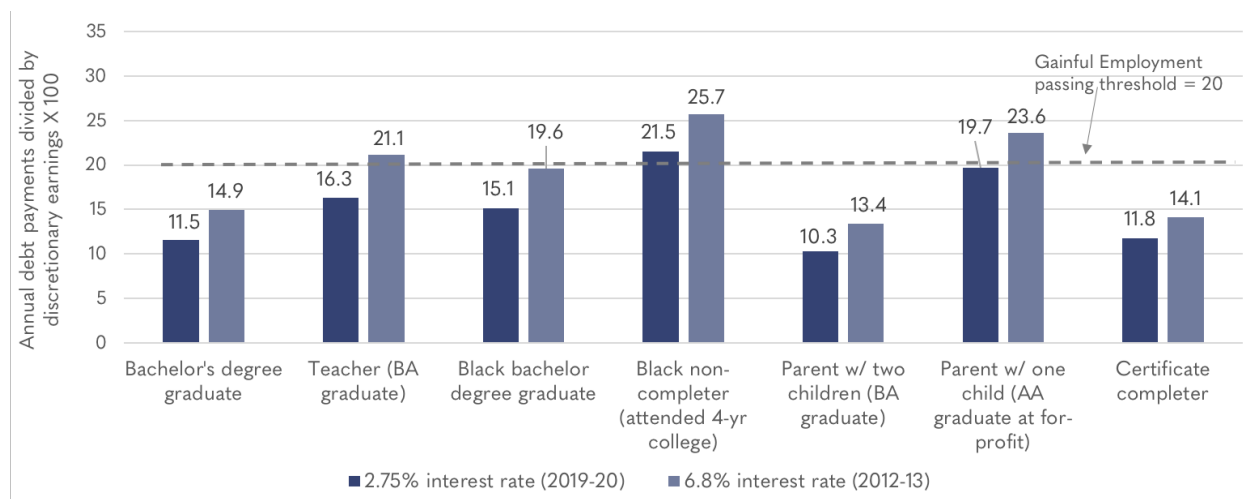
Borrower debt also drives this metric, with lower levels of debt leading to lower debt-to-discretionary earnings ratios, even when borrowers' incomes are relatively low. Despite having a lower income than the bachelor's degree graduates, the certificate completer has one of the lower (better) debt-to-discretionary earnings ratios of 11.8 at the lower interest rate. Conversely, the parent who graduated with an associate's degree at a for-profit college has higher earnings than the certificate completer but much higher debt and debt-to-discretionary earnings ratio (19.7).

The teacher, Black bachelor's degree graduate, and Black non-completers have worse ratios as well (16.3, 15.1, and 21.5, respectively). The teacher has a higher ratio resulting from more modest earnings than the typical bachelor's degree graduate (\$33,550 vs. \$40,000). The Black bachelor graduate has the second-highest income among the group, but has a ratio that falls in the middle of the pack, as the result of graduating with \$7,000 more debt than the typical bachelor's degree graduate. The Black non-completer had the highest ratio since earned income was lowest among the examples (\$28,100), and debt was still high enough to drive up the ratio (\$16,000).

Interest rates additionally influence debt-to-discretionary earnings because higher rates result in higher monthly debt payments for borrowers. Ratios increase by over four percentage points for the Black student-borrowers and the teacher, each under the higher interest rate of 6.8 percent, compared to the lower interest rate of 2.75 percent. The ratios for these three examples are close to, or above 20 percent—the threshold used to determine whether a program was passing under GE.

FIGURE A1

DEBT-TO-DISCRETIONARY EARNINGS THREE YEARS INTO REPAYMENT: EXAMPLE BORROWERS BY INTEREST RATE



Borrower examples based on TICAS calculations using the U.S. Department of Education's Baccalaureate and Beyond (B&B) Longitudinal Study 2016/2017 and Beginning Postsecondary Students (BPS) 2012/17. Debt-to-discretionary earnings is the ratio of the annual loan payments, compared to those same former students' average discretionary annual income. Discretionary earnings subtract 150% of the Federal Poverty Line from the average student salary, based on the 2017 Federal Poverty Line.

TABLE A1

NUMBER OF INSTITUTIONS BY AVERAGE EARNINGS TEN YEARS AFTER ENTRY INTO COLLEGE AND FIVE-YEAR REPAYMENT RATE FOR 2014-15					
Example borrower:	Student debt	Annual loan payment (2.75% interest)	Annual loan payment (6.8% interest)	Annual earnings (year 3)	Discretionary earnings (year 3)
Bachelor's degree graduate	\$29,000	\$2,350	\$3,050	\$40,000	\$20,400
Teacher (BA graduate)	\$28,000	\$2,250	\$2,950	\$33,550	\$13,950
Black bachelor degree graduate	\$36,000	\$2,900	\$3,800	\$38,950	\$19,350
Black non-completer (attended four-year college)	\$16,000	\$1,850	\$2,200	\$28,100	\$8,500
Parent with two children (BA graduate)	\$37,000	\$3,000	\$3,900	\$48,650	\$29,050
Parent with one child (AA at for-profit)	\$24,000	\$2,750	\$2,200	\$33,550	\$13,950
Certificate completer	\$11,000	\$1,250	\$1,500	\$30,300	\$10,700

Borrower examples based on TICAS calculations using the U.S. Department of Education's, Baccalaureate and Beyond (B&B) Longitudinal Study 2016/17 and Beginning Postsecondary Students (BPS) 2012/17, accessed November 2020. This table displays the average annual salary and average cumulative debt for undergraduates who received federal student loans. Discretionary earnings subtract 150% of the Federal Poverty Line from the average student salary. Per GE rule, loan payments calculated based on 10-year fixed payment plan for non-completers, certificate completers, and associate degree graduates, while loan payments are calculated based on 15-year fixed payment plan for bachelor's degree graduates. Earnings and debt are adjusted to 2017 dollars and figures are rounded to the nearest \$50.

Earnings Net of Debt Payments

The annual earnings of borrowers matters much more than the debt amount or interest rate in determining earnings net of debt payments, using the exact same examples and inputs as above. The average bachelor's degree graduate and the example parent with two children have the highest earnings net of debt payments at \$37,650 and \$45,650, respectively, under the lower interest rate. They both have the highest earnings, before subtracting debt payments, and their debt payments are relatively small in comparison.

The contrast in the two Black borrower examples shows a great deal of influence that labor market outcomes have on earnings net of debt payments. Despite having a heavier debt burden, the Black bachelor's degree graduate has an earnings net of debt payments only slightly lower than the typical bachelor's degree graduate (\$37,650 vs. \$36,600 at the lower interest rate). The Black non-completer has much lower earnings net of debt payments (\$26,300) than their Black counterpart who graduated and experienced a bump in earnings.

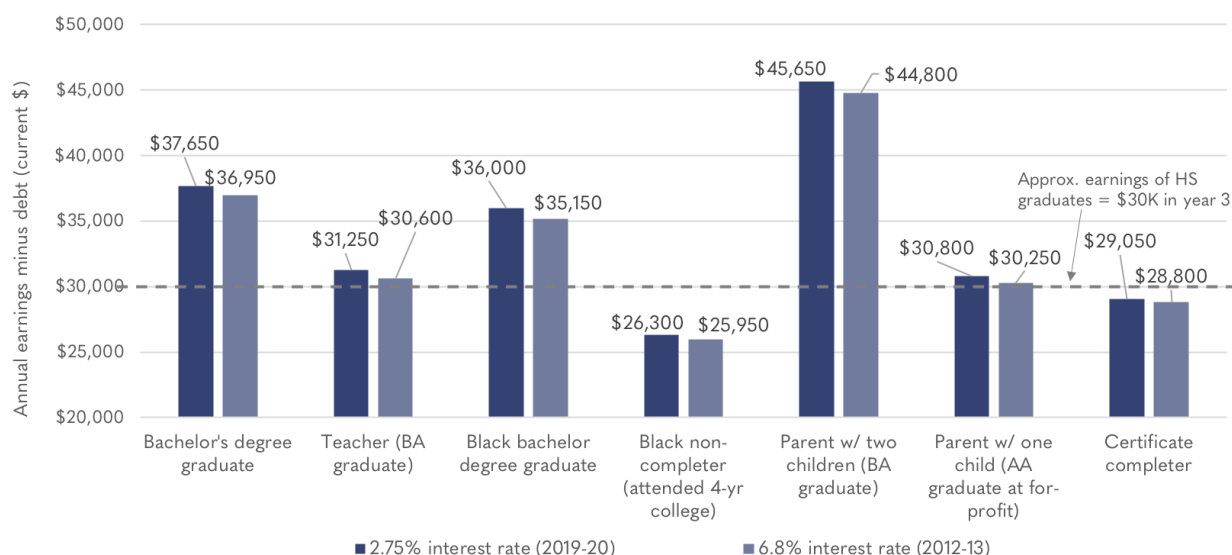
The teacher falls roughly in the middle of the examples and makes a relatively modest income, but still makes substantially more than what is typical for a high school graduate or certificate completer. The teacher's debt subtracts less than \$3,000 off earnings in both interest rate scenarios, leaving this borrower with more disposable income than what a high school graduate typically makes. The parent who graduated with an associate's degree also places near the middle, with the same income as the teacher and slightly higher debt payments.

In contrast, debt amounts matter a lot less, as shown by the certificate completer. This example has the second lowest earnings net of debt payments measure of the group, even though this borrower graduated with much less debt. This result is driven by the fact the certificate completer has the second lowest income at \$30,300, before subtracting out debt payment. Disposable income for a certificate completer, after taking out debt payments, is potentially less than the typical high school graduate with no college experience at all.

Finally, interest rates have little influence on this measure. For all seven examples, raising the interest rate from 2.75 percent to 6.8 percent decreases earnings net of debt payments by less than \$1,000. In the two examples with the least debt, this change was even lower, at less than \$600.

FIGURE A2

ANNUAL EARNINGS NET OF DEBT PAYMENTS THREE YEARS INTO REPAYMENT: EXAMPLE BORROWERS BY INTEREST RATE



Borrower examples based on TICAS calculations using the U.S. Department of Education's, Baccalaureate and Beyond (B&B) Longitudinal Study 2015/17 and Beginning Postsecondary Students (BPS) 2012/17, accessed November 2020. Earnings and debt are adjusted to 2017 dollars and figures are rounded to the nearest \$50.

TABLE A2

COMPONENTS OF EARNINGS NET OF DEBT PAYMENTS, BY EXAMPLE BORROWER				
Example borrower:	Student debt	Annual loan payment (2.75% interest)	Annual loan payment (6.8% interest)	Annual earnings (year 3)
Bachelor's degree graduate	\$29,000	\$2,350	\$3,050	\$40,000
Teacher (BA graduate)	\$28,000	\$2,250	\$2,950	\$33,550
Black bachelor degree graduate	\$36,000	\$2,900	\$3,800	\$38,950
Black non-completer (attended four-year college)	\$16,000	\$1,850	\$2,200	\$28,100
Parent with two children (BA graduate)	\$37,000	\$3,000	\$3,900	\$48,650
Parent with one child (AA at for-profit)	\$24,000	\$2,750	\$3,300	\$33,550
Certificate completer	\$11,000	\$1,250	\$1,500	\$30,300

Borrower examples based on TICAS calculations using the U.S. Department of Education's Baccalaureate and Beyond (B&B) Longitudinal Study 2016/17 and Beginning Postsecondary Students (BPS) 2012/17, accessed November 2020. This table displays the average annual salary and average cumulative debt for undergraduates who received federal student loans. Per GE rule, loan payments calculated based on 10-year fixed-interest payment plan for non-completers, certificate completers, and associate degree graduates, while loan payments are calculated based on 15-year fixed payment plan for bachelor's degree graduates. Earnings and debt are adjusted to 2017 dollars, and figures were rounded to the nearest \$50.

Repayment Rate

Negative amortization and repayment rates are ultimately driven by whether IDR- and non-IDR-borrowers alike make payments, when they pay, and how much they pay relative to accruing interest. In contrast with two earnings-based metrics, college-level rates from College Scorecard are available for analysis. The table below shows typical repayment rates among dependent students, independent students, completers, and non-completers.

Completion has substantial influence over repayment rate, and borrowers who leave college with a credential are much more likely to make headway on their loans than non-completers, regardless of the type of institution they attended. For instance, over two-thirds of completers who attended community college have reduced their loan balance after five years in repayment, compared to 2 in 5 borrowers who attended community college and did not graduate. Stated another way, students who graduate are much less likely to fall behind on their loans than students who dropout with no degree.

Level of debt may also influence repayment rate and negative amortization. Independent students, who are more likely to have their own families to support, and typically have higher levels of debt than dependents, are less likely to reduce their loan balances over five years. The average repayment is 70.4 percent among borrowers who attended a public four-year college and were claimed as dependents, while the repayment rate is only 54.0 percent for borrowers who filed as independent students.

TABLE A3

AVERAGE FIVE-YEAR REPAYMENT RATE, MEASURED IN 2014-15, BY COMPLETION STATUS, DEPENDENCY STATUS, AND INSTITUTION TYPE					
Institution type	All borrowers	Dependents	Independents	Completers	Non-completers
Public four-year	65.9%	70.4%	54.0%	79.6%	54.8%
Nonprofit four-year	66.6%	66.2%	49.5%	78.3%	52.6%
Public community college	48.1%	55.9%	40.0%	68.6%	40.7%
For-profit	32.9%	40.8%	29.3%	41.3%	25.9%
Total	53.0%	62.5%	39.0%	66.4%	42.7%
MSI type					
Public HBCU	34.5%	33.6%	37.3%	49.5%	27.9%
Nonprofit HBCU	31.2%	31.0%	29.7%	46.3%	25.4%
Public PBI	37.4%	40.7%	34.5%	56.5%	32.4%
Nonprofit PBI	45.9%	54.7%	36.2%	58.2%	36.2%
Tribal college	41.2%	49.0%	37.3%	58.9%	34.8%
Special focus					
Religious affiliation	68.7%	66.5%	53.9%	80.0%	54.9%

Source: College Scorecard college-level data, accessed in November 2020. The table displays the fraction of repayment cohort who are not in default with loan balances that have declined five years since entering repayment and college completion rates for these repayment cohorts. Institutions are disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). Repayment rates were calculated on a two-year pooled cohort of undergraduates who started repayment on federal loans in FY2009 and FY2010.

While negative amortization likely occurs when borrowers either miss loan payments or receive temporary relief such as deferments or forbearances, borrowers can additionally have negatively amortizing loans if they are enrolled in IDR and make so little income that required payments do not keep up with accruing interest, even if borrower make all required payments. Yet, negative amortization is not the worst outcome for borrowers enrolled in an IDR plan, and sometimes IDR borrowers in negative amortization will start paying down their loan balance, as their earnings grow over time.

To model the interaction of IDR and negative amortization, the same example borrowers presented for debt-to-discretionary earnings and earnings net of debt were updated to reflect typical debt and earnings amounts for equivalent borrowers with IDR loans. These examples indeed show that negative amortization can occur from IDR borrowers who successfully graduate, attain employment, and make all required payments.

The examples also show negative amortization—and by extension repayment rates—are highly sensitive to debt amounts and interest rates, and less influenced by borrowers' earnings when borrowers are enrolled in IDR. Five in seven of the example borrowers would successfully reduce the loan balances and avoid negative amortization after five years in repayment, under the lower interest rate assumption (2.75%), while all seven of the same borrowers would have increasing loan balances and negatively amortizing loans under the higher interest rate (6.8%).

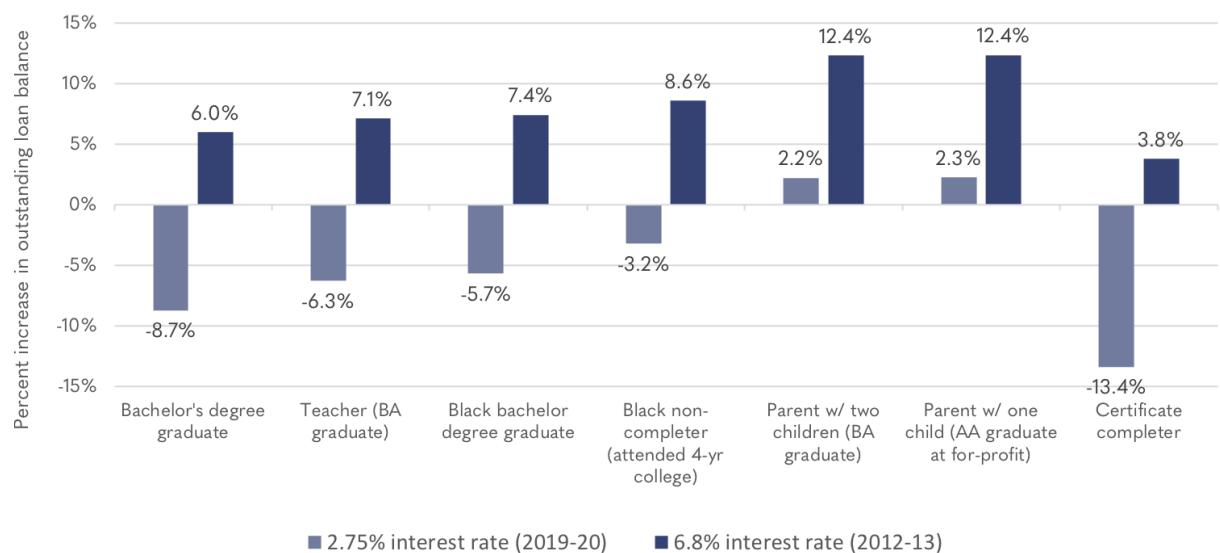
Debt amounts matter a lot since lower debt payments more than make up for borrowers having more modest incomes. For a certificate completer, with \$14,000 of debt and annual earnings of \$25,000, loan balances after five years decrease (-13.4%), under the lower interest rate, and loans amortize less quickly for such a borrower than the other example borrowers, under the higher interest rate (3.8%). The Black non-completer would also avoid an increasing loan balance under the lower interest rate, even though this borrower makes less (\$25,000) than the typical high school graduate. This student borrowed \$22,000 and only needs to pay about \$600 per year to avoid negative amortization, an amount that is covered by the IDR payment. (The higher interest rate, however, increases interest amounts well above projected IDR payments.)

Another unique feature of negative amortization for IDR borrowers is that those with a larger family size are much more likely to fall behind on interest payments because students with larger families can subtract more of their earnings from the IDR payment calculation, and, in turn, pay less on loans than they would with fewer family members. Moreover, students with dependents have higher borrowing limits and typically borrow more for college. The parent with two children earned the most income among the example borrowers (\$39,000), but also borrowed the most (\$47,000), and has negatively amortizing loans, even under the lower interest rate. The parent who graduated with an associate's degree shows a similar pattern of negative amortization, although this example had lower earnings that were offset by somewhat less debt compared to the other parent.

Still, negative amortization is less likely for borrowers who earn more after college, when considering example borrowers with similar loan amounts. Under the lower interest rate scenario, for instance, the typical bachelor's degree graduate pays down loan balances faster than the teacher counterpart (-8.7% vs. -6.3%) as result of differences in earnings. Additionally, the Black college graduate pays loans down faster than the Black college student non-completer, even though the Black graduate accumulated much higher loan amounts.

FIGURE A3

NEGATIVE AMORTIZATION FIVE YEARS INTO REPAYMENT: EXAMPLE BORROWERS IN IDR BY INTEREST RATE



Borrower examples based on TICAS calculations using the U.S. Department of Education's Baccalaureate and Beyond (B&B) Longitudinal Study 2016/17 and Beginning Postsecondary Students (BPS) 2012/17.

TABLE A4

EARNING, DEBT, AND OUTSTANDING LOAN BALANCE, BY EXAMPLE <u>IDR</u> BORROWER				
Example IDR borrower:	Annual earnings (year 1)	Federal student debt borrowed	Outstanding loan balance (2.75% interest)	Outstanding loan balance (6.8% interest)
Bachelor's degree graduate	\$34,000	\$39,000	\$35,600	\$41,350 (neg am)
Teacher (BA graduate)	\$32,000	\$38,000	\$35,600	\$40,700 (neg am)
Black bachelor degree graduate	\$33,000	\$42,000	\$39,600	\$45,150 (neg am)
Black non-completer (attended four-year college)	\$25,000	\$22,000	\$21,300	\$23,900 (neg am)
Parent with two children (BA graduate)	\$39,000	\$47,000	\$48,000 (neg am)	\$52,800 (neg am)
Parent with one child (AA at for-profit)	\$29,000	\$26,000	\$26,600 (neg am)	\$29,200 (neg am)
Certificate completer	\$25,000	\$14,000	\$12,150	\$14,550 (neg am)

Borrower examples based on TICAS calculations using the U.S. Department of Education's Baccalaureate and Beyond (B&B) Longitudinal Study 2016/17 and Beginning Postsecondary Students (BPS) 2012/17. Family size of all examples is one, except for the parent examples. Earnings and debt are adjusted to 2017 dollars and figures are rounded to the nearest \$50.

Summary: How Do the Metrics Compare Based on Borrower Examples?

The borrower examples show that each metric responds differently to various factors. Debt-to-discretionary earnings is influenced by the amount of debt borrowed, the annual income of the borrower, and the interest rate used for the calculation, while earnings net of debt payments is mostly driven by how much borrowers earn and less impacted by the debt amount and interest rate.

Repayment rates behave differently, depending on whether the borrower is in IDR or not. For non-IDR borrowers, repayment rate and negative amortization reflect to what extent borrowers are struggling to consistently make loan payments. When borrowers make enough payments, payments exceed the accruing interest, and loans do not negatively amortize, these borrowers are considered successful outcomes on repayment rate. For IDR borrowers, negative amortization can happen even when borrowers make all required payments. Borrower income must be high enough so that IDR payments exceed the interest on the loan. This makes the metric highly sensitive to the interest rate and, to a somewhat lesser extent, sensitive to the loan amount and annual income of the borrower.

Moreover, the example borrowers suggest these debt metrics are influenced by factors within the control of colleges, including completion, credential quality, pricing, and affordability. The extent to which metrics are influenced by debt and earnings of borrowers, respectively, provides some indication of what strategies colleges may employ to meet minimum standards. Metrics driven by borrower earnings may respond more to completion and improvements in credential quality, while metrics that weigh the amount of debt payments more heavily may respond more to decreases in costs and improved financial aid practices.

TABLE A5

EXPECTED IMPACT OF KEY FACTORS ON DEBT METRICS				
	Debt-to-discretionary earnings	Earnings net of debt payments	Repayment rate / negative amortization (not in IDR)	Repayment rate / negative amortization (in IDR)
Amount of debt borrowed during college	Medium impact; more debt increases numerators of metric (annual loan payment)	Low impact; more debt gradually increases annual loan payment and decreases earnings after debt	Indirect impact; more debt increases scheduled payments and may increase the likelihood borrowers fall behind on payments	Medium impact; more debt increases interest payments and increases the amount of income IDR borrower needs to earn to avoid negative amortization
Annual income earned	Medium impact; more income earned increases denominator of metric (discretionary income)	High impact; an additional \$1 of earnings increases earnings after debt by \$1	Indirect impact; more income earned makes student debt payment more manageable	Medium impact; more income increases likelihood IDR payment will exceed accruing interest and borrower avoids negative amortization
Interest rate	Medium impact; higher interest rate increases numerator of metric (annual loan payment)	Low impact: higher interest rate gradually increases annual loan payment and decreases earnings after debt	Indirect impact; higher interest rate increases scheduled payments and may increase the likelihood borrowers fall behind on payments	High impact; higher interest rate substantially increases accruing interest, and the amount of income an IDR borrower needs to earn to avoid negative amortization
Family size / structure	Indirect and ambiguous impact; a student with multiple family members (e.g., children) may borrow more, but also typically earns more income	Indirect and ambiguous impact; a student with multiple family members (e.g., children) may borrow more, but also typically earns more income	Indirect impact; lower repayment rates among independent students may suggest older students, with multiple family members are more likely to experience negative amortization than younger, dependent students	High impact; higher family sizes substantially reduces payments for an IDR borrower and makes negative amortization more likely

APPENDIX III: ADDITIONAL DATA TABLES

TABLE A6

MEDIAN FEDERAL STUDENT DEBT OF GRADUATES IN 2014-15, BY INSTITUTION TYPE*							
Institution type	Median debt amount	Lowest debt amount	Maximum debt amount	% of institutions w/ median debt amount < \$10,000	% of institutions w/ median debt amount \$10,000-\$19,999	% of institutions w/ median debt amount \$20,000-\$29,999	% of institutions w/ median debt amount ≥ \$30,000
Public four-year	\$20,550	\$2,100	\$39,500	8.7%	35.6%	53.0%	2.6%
Nonprofit four-year	\$25,150	\$2,400	\$46,550	3.3%	14.6%	77.2%	5.0%
Public community college	\$9,200	\$2,350	\$26,500	63.7%	35.1%	1.2%	0.0%
For-profit	\$9,850	\$1,400	\$49,600	53.7%	34.5%	9.4%	2.4%
Total	\$13,300	\$1,400	\$49,600	35.4%	30.3%	31.6%	2.6%
MSI type							
Public HBCU	\$27,800	\$9,000	\$39,500	4.7%	9.3%	51.2%	34.9%
Nonprofit HBCU	\$31,000	\$11,250	\$44,000	0.0%	7.0%	32.6%	60.5%
Public PBI	\$8,000	\$4,500	\$29,550	71.4%	16.7%	11.9%	0.0%
Nonprofit PBI	\$27,000	\$9,500	\$43,500	8.0%	16.0%	48.0%	28.0%
Tribal college	\$11,650	\$9,500	\$12,000	33.3%	66.7%	0.0%	0.0%
Special focus							
Religious affiliation	\$25,250	\$5,400	\$44,000	0.8%	11.8%	81.6%	5.8%

Source: College Scorecard college-level data, accessed in November 2020. The table displays the median federal debt of college graduates. Institutions are disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). Median debt was calculated on a two-year pooled cohort of undergraduate students who received federal student loans and separated from college in FY2014 and FY2015. Figures rounded to nearest \$50.

TABLE A7

PERCENTAGE OF STUDENTS WITH NO EARNINGS TEN YEARS AFTER ENTRY INTO COLLEGE, MEASURED IN 2014-15, BY COMPLETION AND INSTITUTION TYPE			
Institution type	Institutions: < 50% of entering undergrads complete a degree or certificate within six years	Institutions: ≥ 50% of entering undergrads complete a degree or certificate within six years	All Institutions
Public four-year	10.4%	7.1%	8.5%
Nonprofit four-year	15.1%	8.7%	10.9%
Public community college	15.6%	13.7%	15.6%
For-profit	18.8%	18.6%	19.3%
Total	15.2%	10.7%	13.9%
MSI type			
Public HBCU	10.1%	n/a	10.1%
Nonprofit HBCU	9.5%	7.6%	9.1%
Public PBI	15.4%	10.1%	15.0%
Nonprofit PBI	13.1%	9.1%	10.7%
Tribal college	26.2%	25.7%	26.2%
Special focus			
Religious affiliation	11.0%	7.8%	8.8%

Source: College Scorecard college-level data, accessed in November 2020. This table displays the share of federally aided students not working and not enrolled six years after starting college. Institutions are disaggregated by categories of institutions based on level, control, MSI status, religious affiliation (Carnegie Classification), and whether at least half of undergraduates graduated with any degree within ten years (IPEDS, Outcomes Measure, 2015-16). Earnings were calculated on a two-year pooled cohort of undergraduate students, who received federal student aid and separated from college during award years 2003-04 and 2004-05, and were measured ten years later. Figures rounded to nearest \$50.

TABLE A8

PERCENTAGE OF STUDENTS GRADUATING WITHIN SIX YEARS FOR 2014-15, BY INSTITUTION TYPE							
Institution type	Median completion rate	Lowest completion rate	Highest completion rate	% of institutions w/ < 25% of students graduating	% of institutions w/ 25-49% of students graduating	% of institutions w/ 50-74% of students graduating	% of institutions w/ ≥ 75% of students graduating
Public four-year	49.8%	9.4%	98.1%	6.5%	44.2%	40.2%	9.2%
Nonprofit four-year	57.1%	0.0%	100.0%	7.4%	29.1%	45.9%	17.6%
Public community college	25.7%	0.0%	93.9%	46.7%	48.2%	4.1%	1.0%
For-profit	51.7%	0.0%	100.0%	8.4%	40.1%	35.1%	16.5%
Total	46.7%	0.0%	100.0%	16.6%	38.5%	32.4%	12.5%
MSI type							
Public HBCU	31.5%	11.2%	49.9%	22.0%	78.0%	0.0%	0.0%
Nonprofit HBCU	37.5%	6.7%	92.9%	28.3%	54.3%	13.0%	4.3%
Public PBI	26.4%	7.3%	70.7%	44.4%	48.1%	7.4%	0.0%
Nonprofit PBI	44.2%	0.0%	78.6%	23.1%	38.5%	35.9%	2.6%
Tribal college	20.0%	0.0%	58.6%	67.6%	26.5%	5.9%	0.0%
Special focus							
Religious affiliation	55.1%	0.0%	100.0%	6.7%	32.0%	49.1%	12.3%

Source: College Scorecard college-level data, accessed in November 2020. The table displays the percentage of undergraduates who completed a credential within six years of entry. Institutions are disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). College completion rates were calculated from the IPEDS Outcomes Measure component, on a cohort of undergraduate students who entered college in the academic year 2007-08. The data excludes non-degree-granting institutions.

TABLE A9

PERCENTAGE OF GRADUATES MAKING AT LEAST 150 PERCENT OF THE FEDERAL POVERTY LINE (FPL) THREE YEARS AFTER GRADUATION, MEASURED IN 2018-19, BY INSTITUTION TYPE					
Institution type	Median percentage making at least 150% FPL	Lowest percentage making at least 150% FPL	Highest percentage making at least 150% FPL	% of institutions w/ ≥ 50% making at least 150% FPL	% of institutions w/ ≥ 75% making at least 150% FPL
Public four-year	88.8%	32.8%	100.0%	99.5%	95.6%
Nonprofit four-year	88.3%	16.7%	120.0%	97.7%	85.2%
Public community college	81.1%	12.5%	100.0%	99.7%	78.2%
For-profit	60.6%	0.0%	101.3%	74.6%	23.8%
Total	81.2%	0.0%	120.0%	90.8%	64.4%
MSI type					
Public HBCU	84.9%	51.4%	91.2%	100.0%	92.0%
Nonprofit HBCU	79.6%	33.3%	100.0%	93.6%	68.1%
Public PBI	78.4%	63.2%	91.1%	100.0%	65.4%
Nonprofit PBI	82.6%	57.1%	97.1%	100.0%	70.0%
Tribal college	68.3%	12.5%	100.0%	93.3%	26.7%
Special focus					
Religious affiliation	88.5%	6.7%	112.5%	97.9%	87.4%

Source: College Scorecard college-level data, accessed in November 2020. The table displays the share of federally aided students earning more than 150% of the Federal Poverty Line three years after completion. Institutions are disaggregated by categories of institutions based on level, control, MSI status, and religious affiliation (Carnegie Classification). Earnings were calculated on a two-year pooled cohort of undergraduates, who received federal student aid and separated from college during award years 2013-14 and 2014-15, and were measured again in 2017 and 2018. Dollars are inflation-adjusted to 2019. Figures may exceed 100 percent due to privacy protection protocol applied to tax data.

ENDNOTES

- ¹ Policymakers could apply something analogous to a dollar-based or cohort-based repayment rate, such as a breakeven point at which aggregate of loans attributed to a college do not negatively amortize.
- ² The Institute for College Access & Success (TICAS), *Student Debt and the Class of 2019*, October 2020, <https://bit.ly/co/4IMi>.
- ³ TICAS, "Cohort Default Rates," <https://bit.ly/co/4kWt>; Judith Scott-Clayton, *The Looming Student Loan Default Crisis is Worse Than We Thought*, Brookings Institution, January 10, 2018, <https://bit.ly/co/4INS>.
- ⁴ Judith Scott-Clayton, *The Looming Student Loan Default Crisis is Worse Than We Thought*, The Brookings Institution, January 10, 2018, <https://bit.ly/co/4INS>.
- ⁵ Our analysis is based on federal loans due to availability of data. In principle, these metrics should be extended to private loans and failing to do so could have the unintended consequence of driving students to take out private loans with higher rates and fewer protections.
- ⁶ Sandra Black, Jeffery Denning, Lisa Dettling, Serena Goodman, and Lesley Turner, *Taking It to the Limit Effects of Increased Student Loan Availability on Attainment, Earnings, and Financial Well-Being*, Annenberg Institute at Brown University, August 2020, <https://bit.ly/co/4IPI>.
- ⁷ TICAS, *Student Debt and the Class of 2019*, October 2020, <https://bit.ly/co/4IMi>; Judith Scott-Clayton, *The Looming Student Loan Default Crisis is Worse Than We Thought*, Brookings Institution, January 10, 2018, <https://bit.ly/co/4INS>; 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*, National Bureau of Economic Research (NBER), February 2017, <https://bit.ly/co/4IQP>; Diana Farrell, Fiona Greig, and Daniel Sullivan, *Student Loan Debt: Who is Paying it down?* JPMorgan Chase & CO, October 2020, <https://bit.ly/37JlIUQ>; Morgan Taylor, Jonathan Turk, Hollie Chessman, and Lorelle Espinosa, *Race and Ethnicity in Higher Education: 2020 Supplement*, American Council on Education, 2020, <https://bit.ly/co/4IWF>.
- ⁸ Robert Kelchen, *Using Earnings Metrics for Accountability*, Higher Learning Advocates, October 2020, <https://bit.ly/3n1tZXR>; Nick Hillman, *Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education*, Third Way, November 2020, <https://bit.ly/36YjcrM>; Robert Kelchen and Amy Li, "Institutional Accountability: A Comparison of the Predictors of Student Loan Repayment and Default Rates," *The ANNALS of the American Academy of Political and Social Science* 671, 202-223. 10.1177/0002716217701681, April 27, 2017, <https://bit.ly/3hl2PmS>.
- ⁹ Staff from Senator Lamar Alexander, outgoing chairman of the Senate education committee's office have written, "rather than using a government definition of what is an 'acceptable' amount of debt, federal policymakers should explore whether measures of actual loan repayment are more useful for determining whether to continue to allow student loans to pay for specific programs or institutions." Similarly, a Biden administration has acknowledged that "too often individuals have been swindled into paying for credentials that don't provide value to graduates in the job market" and in an effort to stop for-profit programs from profiting off of students will, "require for-profits to prove their value to the U.S. Department of Education before gaining eligibility for federal aid." U.S. Senator Lamar Alexander and staff, *Higher Education Accountability*, U.S. Senate Committee on Health, Education, Labor and Pensions, February 2018, <https://bit.ly/374Yyq3>; The Biden Plan for Education Beyond High School, <https://bit.ly/3oFpuLV>.
- ¹⁰ U.S. Department of Education, "Fact Sheet: Obama Administration Increases Accountability for Low-Performing For-Profit Institutions," July 1, 2015, <https://bit.ly/co/4IQe>; Ben Miller, "Closing A Major Loophole in Default Rate Accountable," Center for American Progress, October 28, 2019, <https://bit.ly/co/4IQg>.
- ¹¹ Program Integrity: Gainful Employment (Final Rule), 34 CFR 600 and 34 CFR 668 (2014), <http://bit.ly/2ZOXg8b>; TICAS, "How Much Did Students Borrow to Attend the Worst-Performing Career Education Programs? The Need for a Strong Gainful Employment Rule," August 22, 2018, <https://bit.ly/3hKNfXx>.
- ¹² Failing programs are those where typical graduates' estimated student loan payments exceed both 12 percent of total income and 30 percent of discretionary income; programs that fail in two out of three years lose eligibility for federal financial aid. "Zone" programs are those where typical graduates' estimated student loan payments exceed both 8 percent of total income and 20 percent of discretionary income; zone programs lose eligibility if they fail in four consecutive years. Passing programs are those where typical graduates' estimated student loan payments are below either 8 percent of total income or 20 percent of discretionary income. See U.S. Department of Education, "Education Department Releases Final Debt-to-Earnings Rates for Gainful Employment Programs," January 9, 2017, <https://bit.ly/3hDguM0>; Program Integrity: Gainful Employment (Final Rule), 34 CFR 600 and 34 CFR 668, (2014), <http://bit.ly/2ZOXg8b>; TICAS, "How Much Did Students Borrow to Attend the Worst-Performing Career Education Programs? The Need for a Strong Gainful Employment Rule," August 22, 2018, <https://bit.ly/3hKNfXx>.
- ¹³ Stephanie Cellini, Rajeev Darolia, and Lesley Turner, *Where Do Students Go When For-Profit Colleges Lose Federal Aid?* April 2018, <https://bit.ly/36YQoqD>.
- ¹⁴ Erica Green, "DeVos Ends Obama-Era Safeguards Aimed at Abuses by For-Profit Colleges," *The New York Times*, April 10, 2018, <https://nyti.ms/3m0M8n6>.
- ¹⁵ TICAS, "Cohort Default Rates," <https://bit.ly/co/4kWt>.
- ¹⁶ Hugh Ferguson, "National Student Loan Cohort Default Rate Continues to Drop," National Association of Student Financial Aid Administrators (NASFAA), October 1, 2020, <https://bit.ly/co/4kWv>.
- ¹⁷ Student Borrower Protection Center, *Affirming Accountability: How the Biden Administration Can Stop the Shady Companies Helping For-Profit Colleges Evade Responsibility for Driving Students Into Default*, December 2020, <https://bit.ly/co/4vSJ>.
- ¹⁸ Ben Miller, *Who Are Student Loan Defaulter?* Center for American Progress, December 14, 2017, <https://bit.ly/co/4IRk>.
- ¹⁹ TICAS, "Income-Driven Repayment and Publications and Resources," <https://bit.ly/371kAKk>.
- ²⁰ TICAS, "COVID-19 and Student Loan Repayment Relief is Critical, But Two Consequences Need to be Addressed to Protect Borrowers," November 11, 2020, <https://bit.ly/co/4ITn>.
- ²¹ Todd Sedmak, "Fall 2020 Undergraduate Enrollment Down 4% Compared to Same Time Last Year," National Student Clearinghouse, October 15, 2020, <https://bit.ly/co/4IU4>.
- ²² Michael Itzkowitz, *Want More Students to Pay Down Their Loans? Help Them Graduate*, Third Way, August 8, 2018, <https://bit.ly/co/4kXB>; Adam Looney and Constantine Yannelis, "A Crisis in Student Loans? How Changes in the Characteristics of Borrowers and in the Institutions They Attended Contributed to Rising Loan Defaults," *Brookings Papers on Economic Activity*, September 2015, <https://brook.gs/3m86k6Q>.
- ²³ Michael Itzkowitz, *Want More Students to Pay Down Their Loans? Help Them Graduate*, Third Way, August 8, 2018, <https://bit.ly/co/4kXB>.
- ²⁴ U.S. Department of Education, "Fact Sheet: Focusing Higher Education on Student Success," July 27, 2015, <https://bit.ly/co/4kXE>.
- ²⁵ Calculations by TICAS using 2018 income data from the U.S. Census Bureau, Current Population Survey, 2019 Annual Social and Economic Supplement, Table PINC-04; and unpublished data from the Bureau of Labor Statistics, Current Population Survey, 2018 annual average for unemployment rates. Young adults are defined as persons aged 25 to 34. See U.S. Bureau of Labor Statistics, "Learn More, Earn More: Education Leads to Higher Wages, Lower Unemployment," May 2020, <https://bit.ly/co/4kXH>.
- ²⁶ Stephanie Riegg Cellini and Nicholas Turner, *Gainfully Employed? Assessing the Employment and Earnings of For-Profit College Students Using Administrative Data*, National Bureau of Economic Research (NBER),

May 2016, <https://bit.ly/3n3KylF>.

²⁷ Strada Education Network, *Why Higher Ed? Top Reasons U.S. Consumers Chose Their Educational Pathways*, January 2018, <https://bit.ly/2JKvyuD>; Cooperative Institutional Research Program and the Higher Education Research Institute at UCLA, *The American Freshman: National Norms Fall 2019*, <https://bit.ly/3pQtkcv>, 42.

²⁸ Peter Riley Bahr, *The Labor Market Returns to a Community College Education for Non-Completing Students*, Center for Analysis Postsecondary Education and Employment (CAPSEE), December 2016, <https://bit.ly/co/4vSV>.

²⁹ The Leadership Conference Education Fund, *Gainful Employment: A Civil Rights Perspective*, October 2019, <https://bit.ly/3m2ITge>.

³⁰ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institute, November 2020, <https://brook.gs/2XjmRe1>.

³¹ Anthony Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bit.ly/co/4TiA>.

³² Sandy Baum and Saul Schwartz, *How Much Debt Is Too Much? Defining Benchmarks for Manageable Student Debt*, College Board, 2006, <https://bit.ly/co/4kXP>.

³³ TICAS, "Income-driven Repayment Publications & Resources," <https://bit.ly/co/4tbh>.

³⁴ TICAS, *A New Approach to College Risk Sharing: Enhancing Accountability to Improve Student Outcomes*, March 2017, <https://bit.ly/39XmFIL>; Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student Success*, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGGj>; Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>; Robert Kelchen and Amy Li, "Institutional Accountability: A Comparison of the Predictors of Student Loan Repayment and Default Rates," *The ANNALS of the American Academy of Political and Social Science* 671, 202-223. 10.1177/0002716217701681, April 27, 2017, <https://bit.ly/33Y3LOj>.

³⁵ TICAS, *Driving Down Default: How to Strengthen the Cohort Default Rate to Further Reduce Federal Student Loan Default Risk*, November 2019, <https://bit.ly/3qHHgqB>.

³⁶ The U.S. Department of Education released cohort-based and program-level repayment rates a few weeks before the publication of this report. Researchers and policymakers should examine these rates to better understand the implications of using program-level debt metrics. See U.S. Department of Education, "U.S. Department of Education Announces Additional College Scorecard Updates, Providing Greater Transparency on Borrower Repayment Progress and Postsecondary Costs," January 12, 2021, <https://bit.ly/co/5HTD>.

³⁷ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institute, November 2020, <https://brook.gs/2XjmRe1>; Adam Looney, *Reauthorizing the Higher Education Act: Strengthening Accountability to Protect Students and Taxpayers*, Testimony Submitted to the U.S. Senate Committee on Health, Education, Labor and Pensions, April 10, 2019, <https://bit.ly/co/4kXV>; Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 2018, <https://ampr.gs/3oI4IYC>; Tiffany Chou, Adam Looney, Tara Watson, *Measuring Loan Outcomes at Postsecondary Institutions Cohort Repayment Rates as an Indicator of Student Success and Institutional Accountability*, National Bureau of Economic Research (NBER), <https://bit.ly/co/4IQP>.

³⁸ Sandy Baum and Saul Schwartz, *How Much Debt Is Too Much? Defining Benchmarks for Manageable Student Debt*, College Board, 2006, <https://bit.ly/co/4kXP>.

³⁹ Annual debt-to-earnings, the other ratio introduced under GE, measures graduate debt as a percentage of post-graduation earnings. This

measure complemented the debt-to-discretionary earnings GE metric and was chosen based on mortgage underwriting standards that serve as a rule-of-thumb to assess risk of default on debt.

⁴⁰ U.S. Department of Education, Federal Student Aid, 2015 Gainful Employment (GE) Rates Downloadable Spreadsheet Column Field Names Glossary, <https://bit.ly/3899qU9>; Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bit.ly/co/4TgX>; Anthony Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bit.ly/co/4TiA>.

⁴¹ Program Integrity: Gainful Employment, 34 CFR 600 and 34 CFR 668, (2014), <https://bit.ly/co/4kXe>.

⁴² Ibid.

⁴³ Ibid.; Robert Kelchen, *Using Earnings Metrics For Accountability*, Higher Learning Advocates, October 2020, <https://bit.ly/co/4VMB>.

⁴⁴ TICAS, "What to Know About the Gainful Employment Rule," August 12, 2019, <https://bit.ly/co/4kXg>.

⁴⁵ Ibid.; U.S. Senator Lamar Alexander and staff, *Higher Education Accountability*, U.S. Senate Committee on Health, Education, Labor and Pensions, February 2018, <https://bit.ly/co/4kXj>.

⁴⁶ Michael Itzkowitz, *Price-to-Earnings Premium: A New Way of Measuring Return on Investment in Higher Ed*, Third Way, April 1, 2020, <https://bit.ly/co/4kXr>; Anthony Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bit.ly/co/4TgX>; Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institution, November 2020, <https://brook.gs/2XjmRe1>.

⁴⁷ Anthony Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bit.ly/co/4TiA>.

⁴⁸ TICAS, "Diving Deeper into College Affordability Gaps in California: Assessing Net Price Data and How they Can be Improved for Students Living at Home," August 25, 2020, <https://bit.ly/co/4kXA>.

⁴⁹ U.S. Department of Education, Federal Student Aid, 2015 Gainful Employment (GE) Rates Downloadable Spreadsheet Column Field Names Glossary, <https://bit.ly/co/4Tgp>; Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bit.ly/co/4TgX>; Anthony Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bit.ly/co/4TiA>.

⁵⁰ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institution, November 2020, <https://brook.gs/2Xi0WnE>; Michael Itzkowitz, *Price-to-Earnings Premium: A New Way of Measuring Return on Investment in Higher Ed*, Third Way, April 1, 2020, <https://bit.ly/co/4kXr>.

⁵¹ Anthony Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bit.ly/co/4TiA>.

⁵² Ibid.

⁵³ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>; Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bit.ly/co/4TgX>; Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student*

Success, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGgJ>.

⁵⁴ Program Integrity: Gainful Employment – Debt Measures (Final Rule), 34 CFR 668 (2011), <https://bitly.co/4RjO>.

⁵⁵ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>; Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bitly.co/4TgX>; Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student Success*, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGgJ>.

⁵⁶ 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*, National Bureau of Economic Research (NBER), February 2017, <https://bit.ly/3qKwos4>.

⁵⁷ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>; Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bitly.co/4TgX>; Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student Success*, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGgJ>.

⁵⁸ Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bitly.co/4TgX>.

⁵⁹ Repayment rates can also be based on a test that is tougher than negative amortization, such as reducing loan balances at a certain rate that is predictive of repayment over the lifetime of the loan. However, available data and most oversight and consumer protection activity have centered around negative amortization as the standard. See Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>; Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student Success*, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGgJ>.

⁶⁰ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>; Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bitly.co/4TgX>; Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student Success*, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGgJ>.

⁶¹ 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*, National Bureau of Economic Research (NBER), February 2017, <https://bit.ly/3qKwos4>; Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institution, November 2020, <https://brook.gs/2Xi0WnE>.

⁶² U.S. Department of Education, College Scorecard, *Technical Documentation: College Scorecard Institution-Level Data*, December 2020, <https://bitly.co/4VMj>.

⁶³ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>.

⁶⁴ The U.S. Department of Education released cohort-based and program-level repayment rates a few weeks before the publication of this report. Researchers and policymakers should examine these rates to better understand the implications of using program-level debt metrics. See U.S. Department of Education, “U.S. Department of Education Announces Additional College Scorecard Updates, Providing Greater Transparency on Borrower Repayment Progress and Postsecondary Costs,” January 12,

2021, <https://bitly.co/5HTD>.

⁶⁵ Robert Kelchen, *Using Earnings Metrics for Accountability*, Higher Learning Advocates, October 2020, <https://bit.ly/3n1tZXR>.

⁶⁶ Program Integrity: Gainful Employment (Final Rule), 34 CFR 600 and 34 CFR 668 (2014), <http://bit.ly/2Z0Xg8b>.

⁶⁷ Earnings includes all federally aided undergraduates, including those with grant aid and no loans; while debt includes only federal borrowers.

⁶⁸ U.S. Department of Education, College Scorecard, *Technical Documentation: College Scorecard Institution-Level Data*, December 2020, <https://bitly.co/4VMj>.

⁶⁹ When the analysis was conducted for this report, earnings were reported just one year after graduation. Program-level earnings two years after graduation were recently published, but U.S. Department of Education noted additional limitations related to privacy standards for College Scorecard and more analysis is needed on whether these data are more meaningful than one-year earnings. See TICAS, “Why the College Scorecard Should Complement – Not Replace– the Gainful Employment Standards,” February 26, 2020, <https://bitly.co/4VPK>.

⁷⁰ Robert Kelchen, *Using Earnings Metrics for Accountability*, Higher Learning Advocates, October 2020, <https://bitly.co/4VMB>.

⁷¹ U.S. Department of Education, College Scorecard, *Technical Documentation: College Scorecard Institution-Level Data*, December 2020, <https://bitly.co/4VMj>.

⁷² For more information on 2011 Gainful Employment data, see U.S. Department of Education, Federal Student Aid, “Information About the Gainful Employment Downloadable Spreadsheet,” <https://studentaid.gov/data-center/school/ge/data>.

⁷³ The U.S. Department of Education released cohort-based and program-level repayment rates a few weeks before the publication of this report. Researchers and policymakers should examine these rates to better understand the implications of using program-level debt metrics. See U.S. Department of Education, “U.S. Department of Education Announces Additional College Scorecard Updates, Providing Greater Transparency on Borrower Repayment Progress and Postsecondary Costs,” January 12, 2021, <https://bitly.co/5HTD>.

⁷⁴ 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*, National Bureau of Economic Research (NBER), February 2017, <https://bitly.co/4IQP>; Vivien Lee and Adam Looney, “Headwinds for Graduate Student Borrowers: Rising Balances and Slowing Repayment Rates,” The Brookings Institute, October 2018, <https://brook.gs/3qJp4gj>.

⁷⁵ College Scorecard calculates college-level debt amounts and repayment rates based on federal student loans of undergraduates only. Program-level data from College Scorecard, however, includes graduate and professional degrees. Federal student debt includes all Direct Subsidized and Unsubsidized Loans, through both the William D. Ford Federal Direct Loan Program and the Federal Family Education Loan Program (FFELP), and excludes Parent PLUS loans. These data differ from GE rates that included graduate programs and private, non-federal loans. See U.S. Department of Education, Federal Student Aid, “Gainful Employment – Frequently Asked Questions,” <https://bitly.co/4PKU>.

⁷⁶ Vivien Lee and Adam Looney, “Headwinds for Graduate Student Borrowers: Rising Balances and Slowing Repayment Rates,” The Brookings Institute, October 2018, <https://brook.gs/3qJp4gj>.

⁷⁷ Earnings figures are based on how much federally aided students make ten years after starting college, unless otherwise noted. Students who do not have any earned income are excluded to allow for greater consistency across data sources and mitigate the influence of gaps in tax data or voluntary decisions to forgo paid employment (e.g., missionary work).

⁷⁸ U.S. Department of Education, College Scorecard, *Using Federal Data to Measure and Improve the Performance of U.S. Institutions of Higher Education*, September 2015, Updated January 2017, <https://bitly>.

[co/4Omd](#); Kim Dancy, “The Case for Expanding Gainful Employment Under Trump,” *New America*, January 10, 2017, <https://bitly.co/4Omb>; Anthony P. Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bitly.co/4TiA>; Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student Success*, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGgJ>.

⁷⁹ ITT, a larger for-profit, created “Opportunity Scholarships” that are given retroactively to students after they complete a given quarter. ITT reserved the right to “at any time,” at its discretion, terminate the Scholarships. In this way, ITT reduced the debt loads of graduates without “inefficiently” reducing debt for students not expected to graduate. See TICAS, “TICAS Comments on Gainful Employment Rule Notice of Proposed Rule Making,” September 13, 2018, <https://bitly.co/4kYB>; TICAS, “Comments in Response to April 16, 2013 Federal Register Notice 2013-08891 on Intent to Establish Negotiated Rulemaking Committee,” June 4, 2013, <https://bit.ly/3ama8Pm>.

⁸⁰ U.S. Department of Education, National Center for Education Statistics (NCES), “Indicator 23: Postsecondary Graduation Rates,” *Status and Trends in the Education of Racial and Ethnic Groups 2018*, February 2019, <https://bitly.co/4OVD>.

⁸¹ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institute, November 2020, <https://brook.gs/2XjmRe1>; Clive Belfield and Thomas Bailey, *The Labor Market Returns to Sub-Baccalaureate College: A Review*, Center for Analysis Postsecondary Education and Employment (CAPSEE), March 2017, <https://bit.ly/3mpWiy1>.

⁸² Anthony P. Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bitly.co/4TiA>.

⁸³ Institute for Women’s Policy Research, “Parent’s in College by the Numbers,” August 2020, <https://bitly.co/4OVc>.

⁸⁴ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>.

⁸⁵ Ibid.

⁸⁶ Robert Kelchen and Amy Li, “Institutional Accountability: A Comparison of the Predictors of Student Loan Repayment and Default Rates,” *The ANNALS of the American Academy of Political and Social Science* 671, 202-223. 10.1177/0002716217701681, <https://bit.ly/3hl2PmS>; Diana Farrell, Fiona Greig, and Daniel Sullivan, *Student Loan Debt: Who is Paying it down?* JPMorgan Chase & CO, October 2020, <https://bit.ly/37J1UQ>; 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*, National Bureau of Economic Research (NBER), February 2017, <https://bitly.co/4IQP>.

⁸⁷ TICAS, *Student Debt and the Class of 2019*, October 2020, <https://bitly.co/4kZ1>.

⁸⁸ Ibid.

⁸⁹ Krystal Williams and BreAnna Davis, *Public and Private Investments and Divestments in Historically Black Colleges and Universities*, American Council on Education and United Negro College Fund, January 2019, <https://bitly.co/4kYJ>.

⁹⁰ Debt amounts can be higher at individual colleges, where students take out substantial amounts of non-federal loans, or a sizable proportion of students are independents with higher federal loan limits. The Class of 2019 averaged as much as \$72,900 at some colleges reporting debt amounts that include non-federal loans. See TICAS, *Student Debt and the Class of 2019*, October 2020, <https://bitly.co/4kZ1>.

⁹¹ Calculation of annualized debt payment based on 6.8 percent interest rate and a loan amortization of ten years. Calculation of annual earned

income needed to pass Gainful Employment threshold based on dividing the annualized debt payment by 20 percent (the Gainful Employment threshold) and then adding it to the 150 percent Federal Poverty Line.

⁹² Calculation of annualized debt payment based on 6.8 percent interest rate and a loan amortization of ten years.

⁹³ Program Integrity: Gainful Employment—Debt Measures (Final Rule), 34 CFR 668, (2011), <https://bitly.co/4PjR>.

⁹⁴ The United States Census Bureau, *Post-Secondary Employment Outcomes (PSEO)*, <https://bitly.co/4Qe6>.

⁹⁵ Anthony Carnevale, Ban Cheah, Martin Van Der Werf, and Artem Gulish, *Buyer Beware: First-Year Earnings and Debt for 37,000 College Majors at 4,400 Institutions*, Georgetown University Center on Education and the Workforce, 2020, <https://bitly.co/4TiA>.

⁹⁶ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institute, November 2020, <https://brook.gs/2XjmRe1>.

⁹⁷ Adam Looney and Constantine Yannelis, *The Consequences of Student Loan Credit Expansions: Evidence from Three Decades of Default Cycles*, The Brookings Institute, June 2019, <https://brook.gs/2LD62bg>.

⁹⁸ U.S. Department of Education, College Scorecard, *Technical Documentation: College Scorecard Data by Field of Study*, December 2020, <https://bitly.co/4VbU>.

⁹⁹ Calculations by TICAS using data from the U.S. Department of Education, College Scorecard using pooled cohort available on June 1, 2020. See <https://bitly.co/4VbU>.

¹⁰⁰ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://ampr.gs/2VYDk6E>.

¹⁰¹ Ibid.

¹⁰² College Scorecard data combines programs that share the same four-digit CIP code. Research has shown that impact of combining related CIPs on n-size may be limited because many colleges only have one program within each category of study. Combining all programs within the same credential level would likely have far greater effect on when sanctions occur and how many programs are excluded due to small n-size. See Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institute, November 2020, <https://brook.gs/2Xi0WnE>; Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bitly.co/4TgX>.

¹⁰³ Program Integrity: Gainful Employment (Final Rule), 34 CFR 668, (2011), <https://bitly.co/4PjR>; Program Integrity: Gainful Employment (Final Rule), 34 CFR 600 and 34 CFR 668 (2014), <http://bit.ly/2Z0Xg8b>.

¹⁰⁴ Sandy Baum and Martha Johnson, *Student Debt: Who Borrows Most? What Lies Ahead?* Urban Institute, April 2015, <https://bitly.co/4PkC>.

¹⁰⁵ Under the 2014 Gainful Employment rule, however, colleges with zero median debt would automatically pass the metrics, regardless of the discretionary earned income of federally aided students. This scenario is possible when debt metrics include non-borrowers, and the majority of students do not have any loans.

¹⁰⁶ U.S. Department of Education, Federal Student Aid, “Gainful Employment - Frequently Asked Questions,” <https://bitly.co/4PkU>.

¹⁰⁷ Ibid.

¹⁰⁸ Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student Success*, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGgJ>.

¹⁰⁹ TICAS, “Better Data on Student Borrowing Needed,” October 22, 2008, <https://bitly.co/4wMV>.

¹¹⁰ Lena V Groeger, “What Coronavirus Job Losses Reveal About Racism in America,” *ProPublica*, July 20, 2020, <https://bitly.co/3g9Z>.

- ¹¹¹ The Federal Reserve Economic Data (FRED) Blog, “The Great Recession’s Regional Effects,” Federal Reserve Bank of St. Louis, July 20, 2017, <https://bit.ly/co/4o5q>.
- ¹¹² Students with zero annual income are excluded from earnings throughout this paper, but policymakers may want to include zero earners in calculations of metrics, if they believe zero earnings indicate that borrowers are struggling to find employment.
- ¹¹³ Sylvia Allegretto, *A Post-Great Recession Overview of Labor Market Trends in the United States and California*, Center on Wage and Employment Dynamics, June 2018, <https://bit.ly/co/4PpN>.
- ¹¹⁴ TICAS, *Student Debt and the Class of 2019*, October 2020, <https://bit.ly/co/4kZ1>.
- ¹¹⁵ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institution, November 2020, <https://brook.gs/2XjmRe1>; Michael Itzkowitz, *Price-to-Earnings Premium: A New Way of Measuring Return on Investment in Higher Ed*, Third Way, April 1, 2020, <https://bit.ly/co/4kXr>.
- ¹¹⁶ Adam Looney and Constantine Yannelis, *A Crisis in Student Loans? How Changes in the Characteristics of Borrowers and in the Institutions they Attended Contributed to Rising Loan Defaults*, The Brookings Institution, September 2015, <https://brook.gs/3m86k6Q>.
- ¹¹⁷ U.S. Department of Education, *College Scorecard, Using Federal Data to Measure and Improve the Performance of U.S. Institutions of Higher Education*, September 2015, Updated January 2017, <https://bit.ly/co/4Pr9>.
- ¹¹⁸ Macro Trends, “10-Year Treasury Rate – 54-Year Historical Chart,” <https://bit.ly/co/4PqA>.
- ¹¹⁹ Adam Looney and Constantine Yannelis, *The Consequences of Student Loan Credit Expansions: Evidence from Three Decades of Default Cycles*, The Brookings Institution, June 2019, <https://bit.ly/co/4o75>.
- ¹²⁰ These differences in the trajectory of earnings between institution types may, in part, occur because college-level earnings data from College Scorecard combine graduates and non-completers. Earnings may rise faster over time, among graduates and place earnings on a steeper, upward trajectory at colleges with high graduation rates.
- ¹²¹ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institution, November 2020, <https://brook.gs/2XjmRe1>; Raj Chetty, John N. Friedman, Emmanuel Saez, Nicholas Turner, and Danny Yagan, *Mobility report cards: The Role of Colleges in Intergenerational Mobility*, National Bureau of Economic Research (NBER), <https://bit.ly/2LtQOW2>; Clive Belfield and Thomas Bailey, *The Labor Market Returns to Sub-Baccalaureate College: A Review*, CAPSEE Working Paper, March 2017, <https://bit.ly/co/4o7W>.
- ¹²² U.S. Department of Education, *College Scorecard, Using Federal Data to Measure and Improve the Performance of U.S. Institutions of Higher Education*, September 2015, Updated January 2017, <https://bit.ly/co/4Pr9>.
- ¹²³ The United States Census Bureau, *Post-Secondary Employment Outcomes (PSEO)*, <https://bit.ly/co/4Qe6>.
- ¹²⁴ Program Integrity: Gainful Employment (Final Rule), 34 CFR 600 and 34 CFR 668 (2014), <http://bit.ly/2ZOXg8b>.
- ¹²⁵ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://bit.ly/co/4QIS>.
- ¹²⁶ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institution, November 2020, <https://brook.gs/2XjmRe1>; Robert Kelchen, *Exploring Key Questions: Program-Level Repayment For Higher Education Accountability*, Higher Learning Advocates, November 2018, <https://bit.ly/co/4TgX>; 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*, National Bureau of Economic Research (NBER), February 2017, <https://bit.ly/co/4IQP>.
- ¹²⁷ Program Integrity: Gainful Employment (Final Rule), 34 CFR 600 and 34 CFR 668 (2014), <http://bit.ly/2ZOXg8b>.
- ¹²⁸ Ibid.
- ¹²⁹ TICAS, *A New Approach to College Risk Sharing: Enhancing Accountability to Improve Student Outcomes*, March 2017, <https://bit.ly/co/4QrR>.
- ¹³⁰ The 2014 GE rule relied on earnings data produced by the Social Security Administration (SSA) and has been challenged on several fronts on its collection of earnings data. SSA provided these data several times to the U.S. Department of Education, but, under the Trump Administration and, after the data were misused for another purpose, SSA stopped sharing earnings data with the Department. In 2018, a federal court ruled that this unauthorized use of data violated the Privacy Act. For the court ruling, see <https://bit.ly/co/57Oz>.
- ¹³¹ *American Association of Cosmetology Schools v. Elisabeth Devos*, No.17-cv-00263-RC (D.D.C. June 28, 2017), <https://bit.ly/co/4QOtQ>.
- ¹³² *Association of Private Colleges and Universities, v. Arne Duncan*, in his official capacity as Secretary of the Department of Education and United States Department of Education. Civil Action 11-1314 (RC) (June 30, 2012), <https://bit.ly/3hTnrBV>.
- ¹³³ Ibid; *Association of Private Sector Colleges and Universities v. Arne Duncan*, 870 F. Supp. 2d 133 (June 5, 2012), <https://bit.ly/co/4kZ9>.
- ¹³⁴ Julie Ajinkya and Melissa Moreland, *Driving Toward Greater Postsecondary Attainment Using Data*, Chapter 1, <https://bit.ly/co/4Rev>; Victoria Yuen, *To Begin Solving Student Debt, the Education Department Must Factor in Race and Ethnicity*, Center for American Progress, June 18, 2019, <https://bit.ly/co/4Rez>.
- ¹³⁵ American Statistical Association, *ASA Statement on Using Value-Added Models for Educational Assessment*, April 8, 2014, <https://bit.ly/3h5kRPK>.
- ¹³⁶ Program Integrity: Gainful Employment (Final Rule), 34 CFR 600 and 34 CFR 668, (2014), <http://bit.ly/2ZOXg8b>.
- ¹³⁷ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institution, November 2020, <https://brook.gs/2Xi0WnE>.
- ¹³⁸ Program Integrity: Gainful Employment – Debt Measures (Final Rule), 34 CFR 668 (2011), <https://bit.ly/co/4RjO>.
- ¹³⁹ Hugh T. Ferguson, “National Student Loan Cohort Default Rate Continues to Drop,” National Association of Student Financial Aid Administrators (NASFAA), October 1, 2020, <https://bit.ly/co/4kWv>.
- ¹⁴⁰ Anthony Carnevale, Jeff Strohl, and Neil Ridley, *Good Jobs that Pay Without a BA: A State-by-State Analysis*, Georgetown University Center on Education and the Workforce, 2017, <https://bit.ly/co/4kXw>.
- ¹⁴¹ Jordan Matsudaira and Lesley Turner, *Towards a Framework for Federal Financial Assistance Programs in Postsecondary Education*, The Brookings Institution, November 2020, <https://brook.gs/2Xi0WnE>.
- ¹⁴² Ben Miller, *The Continued Student Loan Crisis for Black Borrowers*, Center for American Progress, December 2, 2019, <https://bit.ly/co/4Rlx>.
- ¹⁴³ Policymakers could apply something analogous to a dollar-based or cohort-based repayment rate, such as a breakeven point at which aggregate of loans attributed to a college do not negatively amortize.
- ¹⁴⁴ Veronica Minaya and Judith Scott-Clayton, *Labor Market Trajectories for Community College Graduates: New Evidence Spanning the Great Recession*, Center for Analysis of Postsecondary Education and Employment (CAPSEE), April 2017, <https://bit.ly/co/4Uht>.
- ¹⁴⁵ Ben Miller, *Getting Repayment Rates Right*, Center for American Progress, July 10, 2018, <https://bit.ly/co/4UWQ>; Amanda Janice and Mamie Voight, *Making Sense of Student Loan Outcomes: How Using Repayment Rates Can Improve Student Success*, Institute for Higher Education Policy, January 2016, <https://bit.ly/3n3gGgJ>.
- ¹⁴⁶ U.S. Department of Education, *Baccalaureate & Beyond Longitudinal Study (B & B, 2016-17)*; Johnathan G. Conzelmann, T. Austin Lacy, and

Nichole D. Smith, "Another day another dollar metric? An event history analysis of student loan repayment," *Education Finance and Policy Journal*, 14(4), 627-651. <https://bit.ly.co/58FZ>; Ben Miller, "The Value of an On-Time Repayment Rate," Center for American Progress, October 2019, <https://ampr.gs/340OqN7>.

¹⁴⁷ For example, young adults with only a high school diploma are almost three times as likely to be unemployed, and earn three-fifths as much, as those with at least a bachelor's degree. Calculations by TICAS using 2018 income data from the U.S. Census Bureau, Current Population Survey, 2019 Annual Social and Economic Supplement, Table PINC-04; and unpublished data from the Bureau of Labor Statistics, Current Population Survey, 2018 annual average for unemployment rates. Young adults are defined as persons aged 25 to 34.

¹⁴⁸ U.S. Bureau of Labor Statistics, "A look at teacher pay across the United States in 2017," May 08, 2018, <https://bit.ly.co/4Nr2>.

¹⁴⁹ See page 14 of TICAS, *Student Debt and the Class of 2019*, October 2020, <https://bit.ly.co/4Nrg>.

¹⁵⁰ This example represents a Black borrower who started a four-year college and did not receive a bachelor's degree within six years, but may have received an associate's degree or certificate.

¹⁵¹ Judith Scott-Clayton, "The Looming Student Loan Default Crisis is Worse Than We Thought," The Brookings Institution, January 11, 2018, <https://bit.ly.co/4TaZ>.

¹⁵² U.S. Department of Education, National Center for Education Statistics (NCES), "Indicator 23: Postsecondary Graduation Rates," *Status and Trends in the Education of Racial and Ethnic Groups 2018*, February 2019, <https://bit.ly.co/4OVD>.

¹⁵³ Institute for Women's Policy Research, "Parent's in College by the Numbers," August 2020, <https://bit.ly.co/4OVc>.

¹⁵⁴ Calculated by TICAS using data from the U.S. Department of Education's Beginning Postsecondary Students Longitudinal Study (BPS), which follows undergraduate students who enrolled in college for the first time in 2011-12.

¹⁵⁵ Although an accountability system could include private loans, all borrower examples only have federal student loan debt as a simplifying assumption.

¹⁵⁶ Figures for bachelor's degree graduates were calculated by TICAS using data from the U.S. Department of Education's Baccalaureate & Beyond Longitudinal Study (B & B). B & B follows students who graduated with a bachelor's degree in 2015-16 and tracks employment and loan outcomes one year after graduation. Figures for borrowers who do not complete a bachelor's degree were calculated by TICAS using data from the U.S. Department of Education's Beginning Postsecondary Students Longitudinal Study (BPS), which follows undergraduate students who enrolled in college for the first time in 2011-12. All income and debt figures from BPS were based on a follow-up survey in 2017 and students were categorized based on educational attainment at six years after starting college. All debt and income figures for borrower examples were adjusted to 2019 dollars, using on the Consumer Price Index (CPI).

¹⁵⁷ Calculations of discretionary earnings are based on the 2020 Federal Poverty Line and assume that the Federal Poverty Line increases annually at the rate of inflation and that the borrower's adjusted gross income (AGI) increases four percent a year.

¹⁵⁸ All borrower examples for negative amortization are assumed to enroll in Revised Pay As You Earn Repayment Plan (REPAYE), which is the most common IDR plan. REPAYE caps payments at 10 percent of discretionary income, which is the difference between the borrower's annual income and 150 percent of the poverty guideline for the borrower's family size and state of residence. All example borrowers live in one of the 48 contiguous states and all example borrowers have a family size of one, except for the parent examples who have family sizes of three and two respectively in year one. Calculations are based on 2020 poverty levels and assume that the poverty level increases annually at the rate of inflation and that the borrower's adjusted gross income (AGI) increases four percent a year. For information on TICAS' IDR modelling methodology, see <http://bit.ly/2haTM3c>.

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