OCTOBER 2012

Safety Net or Windfall?

Examining Changes to Income-Based Repayment for Federal Student Loans

JASON DELISLE AND ALEX HOLT

EDUCATION POLICY PROGRAM

Federal Education Budget Project

NEW AMERICA FOUNDATION

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Executive Summary

In his 2010 State of the Union address, President Obama urged Congress to change the federal student loan program's existing Income-Based Repayment (IBR) plan, which caps borrowers' payments at 15 percent of their incomes and forgives any remaining debt after 25 years of payments. He argued that high college tuition was an untenable burden for the middle class, and that by reducing payments to 10 percent of a borrower's income and providing loan forgiveness after 20 years of payments, lawmakers could provide borrowers with relief.[1]

Congress enacted this proposal two months later, but limited it to students who take out their first loans on July 1, 2014, or later.[2] Then, in 2011, the Obama administration announced that it would make this plan available sooner—to borrowers who took out their first loans in 2008 or later and took out at least one loan in 2012 or later—and that eligible borrowers may be able to enroll by 2012 if regulations are finalized by then.[3]

The New America Foundation developed a calculator to examine how the pending changes to IBR will affect different types of borrowers.[4] We analyzed hundreds of scenarios for different borrower profiles and found that the pending changes to IBR will have the following effects.

Findings:

- Lower-income borrowers will see minimal new benefits. These borrowers have too little income above IBR's "cost-of-living" exemption, such that reducing the share of their income used to calculate their monthly payments amounts to a reduction of $5 to $20 in their monthly payments. The shorter loan-forgiveness time period is of some benefit, but only truncates a repayment schedule under which borrowers were making no payments or very small monthly payments to begin with.[5]

- Borrowers with middle incomes will receive some increase in benefits under the pending changes to IBR, but only if they borrow the maximum in federal student loans ($31,000 for dependent undergraduates). Even so, annual and aggregate loan limits minimize the benefits that the changes to IBR will provide to borrowers who have loans from pursuing undergraduate studies. Middle-income borrowers with less debt will actually pay more and for longer due to the pending changes.[6]

- Middle- and high-income borrowers who attend graduate and professional school will see significant new benefits. The federal student loan program allows graduate students to borrow unlimited amounts to pay for the cost of their education. Due to the pending IBR changes, these borrowers will bear only a fraction of the incremental cost of borrowing an additional dollar once they reach $40,000 in debt, and incur no incremental cost in borrowing an additional dollar after they reach $60,000 even if they earn a high income over most of their repayment terms.[7] Borrowers with such debt levels are very likely to have substantial amounts forgiven under the pending changes to IBR, even if they earn incomes well above $100,000.

Recommendations:

It is likely that the changes to IBR will make graduate and professional students less sensitive to tuition costs. We also expect that the changes will encourage schools, particularly graduate and professional schools, to market IBR's benefits to prospective, current, and graduating students as a means of financing higher tuition and fees instead of attempting to make the schools more affordable. In response, this paper outlines ways in which policymakers should amend the pending changes to IBR to limit the benefits it provides to borrowers with both high debt loads and high incomes, mitigate the incentives it provides for graduate and professional schools to increase tuition, and yet preserve the benefits that the pending changes will provide to lower-income borrowers. Lawmakers should adopt the following changes:

- Maintain the lower payment calculation (10 percent of income) only for borrowers with incomes at or below 300 percent of the federal poverty guidelines. Borrowers with incomes above that level should pay 15 percent of their incomes.

- Provide loan forgiveness after 20 years of payments, but only for borrowers whose loan balances when they entered repayment did not exceed $40,000. Borrowers with higher initial balances would still qualify for loan forgiveness after 25 years of repayment.

• Eliminate the maximum payment cap that allows higher-income borrowers to make payments that are no longer based on their incomes. The cap increases the chances that a borrower earning a very high income would qualify for loan forgiveness.

• The U.S. Department of Education, federal loan servicers, and policymakers should be forthcoming about the negative consequences borrowers may face when repaying through IBR. They should provide borrowers with illustrative examples of how paying off their loans more slowly can increase what they pay overall and how much they pay monthly later in their repayment terms. The Department should promote the consolidation repayment option as another way that borrowers may reduce their monthly payments and extend their repayment terms, but one under which their loan balances do not grow.

• IBR payments for a borrower who is married but files a separate income tax return should be based on the household's combined income, unless both earners are repaying student loans through IBR—in which case each borrower would pay based on half of the total household income. The program currently allows borrowers to file separate income tax returns and use only their own income to calculate payments under IBR. A married borrower who is in a high-income household, but individually earns a low income can still qualify for IBR (including loan forgiveness) by filing a separate income tax return.

• Make loan forgiveness tax-free. Federal tax law treats loan forgiveness under IBR (except when provided for public service employees) as taxable income. If IBR is meant to aid struggling borrowers, then it should not impose its own type of financial burden on them.

• Allow all borrowers to enroll in an IBR that reflects these recommendations. Do not limit it to new borrowers as of a certain date.

Public anxiety over college costs and student debt is at an all-time high. As college prices keep rising, more students are borrowing, and they are increasingly struggling to pay it back. Student loan default rates are growing as new graduates entering a weak job market struggle to repay debt that often exceeds $25,000.

Recognizing that borrowers struggle most to repay their loans in their first years out of college, when they earn less, lawmakers in 2007 created something called Income-Based Repayment, or IBR, a program that limits students' loan payments to a percentage of their income, and forgives any balance after a certain number of payments. In 2010, Congress created a new, more generous IBR program scheduled to go into effect in 2014, but the Obama administration accelerated the rollout date to late 2012. Student advocates have lauded the program, which will require smaller loan payments and forgive debt quicker. The White House has touted it as a solution to rising college costs and student indebtedness.

The U.S. Department of Education's website provides information about the changes coming to IBR for students or graduates who are interested.[8] But one financial planning business provides students with a more straightforward—and opportunistic—explanation about the pending changes. The Advantage Group, which hosts www.ibrloan.com, offers the advertisement shown on this page.

CALIFORNIA WESTERN
SCHOOL OF LAW | San Diego

STOP WASTING YOUR MONEY ON STUDENT LOAN PAYMENTS

In 2010 the average indebted graduate from Cal Western School of Law owed more than $145,000 *

- Monthly Loan payments after graduating average more than $1,690.

On October 25, 2011 the Obama Administration introduced a new program that could allow a graduate with a starting salary of $70,000 to:

- Reduce monthly payments to **$448** a month.
- Have over **$100,000** of debt forgiven.

Source: The Advantage Group [http://www.ibrloan.com/student-debt/schools/cwsol.html]

Sure, having $100,000 in debt forgiven while you earn $70,000 a year sounds like a get-rich-quick scam. After all, the most the federal government will provide college students is $22,200 over four years through the Pell Grant program, which is targeted to only the neediest undergraduate students. Surely the federal government doesn't have a program that would give over four times as much aid to law school graduates with starting annual salaries of $70,000 who go on to earn much more over their careers? Except, this turns out to be true.

The advertisement on www.ibrloan.com may read like a late-night infomercial, but the Advantage Group's analysis of the changes Congress and the Obama administration have made to IBR is accurate enough. If left unchanged, the program is set to provide huge financial windfalls to people who, far from being needy, are among the most financially well-off graduates in today's job market.

To be clear, IBR is based on sound principles. Defaulting on a federal student loan can quickly lead to financial ruin, and the debt is nearly impossible to discharge in bankruptcy. IBR gives college graduates a safety net. But sound principles do not alone make good policies. Policymakers must still get the details right. Had they done that when they enacted the pending IBR changes, they would not have opened huge loopholes that, left unclosed, will divert taxpayer dollars to wealthy graduates while simultaneously reducing incentives for overly expensive colleges to restrain tuition growth. The program will also cause some borrowers to pay down their loans in a way that will yield little short-term benefit while significantly increasing their borrowing costs in the long run.

Fortunately, the pending changes to IBR have yet to take effect. There is still time to fix these and other problems detailed in this New America Foundation analysis, making IBR a fair, responsible, and targeted source of aid.

IBR Overview and Legislative History

Under federal law, students who leave school with federal student loans may choose from a number of repayment plans. They are:

- **Standard repayment**, which is a level 10-year repayment plan in which the borrower makes 120 monthly payments of the same amount sufficient to fully repay the loan and any accrued interest;

- **Extended repayment**, which allows borrowers with balances of $30,000 and more to repay over 25 years at fixed or graduated rates;

- **Consolidation**, which allows borrowers with $7,500 to $9,999 in loans to pay over 12 years; borrowers with $10,000 to $19,999 in loans to pay over 15 years; borrowers with $20,000 to $39,999 in loans to pay over 20 years; borrowers with $40,000 to $59,999 in loans to pay over 25 years; and borrowers with $60,000 or more in loans to pay over 30 years. Payments on consolidation loans are set—at either a fixed rate or a graduated rate—so that the borrower will fully repay his loan over the repayment term. Under the fixed-rate option, a borrower makes level payments over the entire repayment term. Under the graduated repayment option, the borrower makes lower initial payments that increase every two years over the entire repayment period.[9] Under graduated repayment, a borrower pays more than he would under level payments because he pays more interest, but the length of repayment is the same as the fixed-rate option;[10] and

- **Income-Based Repayment**, which allows borrowers to make monthly payments based on their incomes if they meet certain debt-to-income qualifications.

Income-Based Repayment (IBR) was first enacted as part of the College Cost Reduction and Access Act of 2007 and has since been amended to include new benefits for more recent borrowers.[11] This original IBR program—referred to as "Old IBR" throughout this paper—sets a borrower's monthly payment on his federal student loans at a percentage of his income. A borrower may elect the IBR option if what he would pay monthly under the standard 10-year repayment plan would be higher than 15 percent of his adjusted gross income, after deducting 150 percent of the poverty guidelines. His payment under IBR is then reduced to 15 percent of his AGI minus the poverty exemption. After 25 years, the federal government then forgives any unpaid interest or principal on the loan.[12] Borrowers who have completed 10 cumulative years of full-time employment in a public service occupation since October 1, 2007 while repaying their loans in the Direct Loan program, will have the remaining loan interest and principal forgiven.[13] While qualifying borrowers with federal student loans of all types are eligible for IBR repayment and loan forgiveness, public service loan forgiveness is available only to borrowers with Direct Loans.[14]

In 2010, after President Obama recommended it in his budget request, Congress modified Old IBR as part of the Health Care and Education Reconciliation Act of 2010.[15] The law changed the payment calculation from 15 percent to 10 percent of a borrower's income and made borrowers eligible for loan forgiveness after 20 years of payments instead of 25 years, but left all other parts of Old IBR intact, including public service loan forgiveness at 10 years of repayment.[16] As enacted, only new borrowers on or after July 1, 2014 were eligible to repay using this new formula. [17]

In October 2011, President Obama announced that the U.S. Department of Education was taking executive action (called "Pay As You Earn," or PAYE) to make all borrowers who took out federal loans after 2008, not July 2014, eligible for New IBR.[18] New borrowers as of that date must also have taken out at least one federal student loan on or after October 1, 2011, to qualify.[19] The U.S. Department of Education expects to finalize the rules and regulations for PAYE in late 2012, at which point borrowers may enroll. The PAYE plan is nearly identical to New IBR. This paper treats both the IBR formula available to new borrowers as of 2014 and the PAYE plan available to new borrowers as of 2008 as identical plans and refers to them both as "New IBR."[20]

Policy Rationale for IBR

Many people understand IBR to be a safety net for struggling student loan borrowers. The program provides borrowers with low incomes an option to reduce monthly payments or postpone them indefinitely if their incomes remain sufficiently low. For borrowers who experience short periods of unemployment or some other extenuating circumstances, IBR can help them avoid becoming delinquent or defaulting on their loans—both outcomes that result in penalty fees and can damage borrowers' credit reports. While IBR was not the first program to allow struggling borrowers to repay loans based on their incomes—Congress created the Income Contingent Repayment plan in the early 1990s—it is more generous than what existed at the time.[21] Even so, when Old IBR was enacted, lawmakers focused exclusively on the loan forgiveness benefits of the program for borrowers in public service jobs. Few mentioned that the program would allow borrowers to make lower monthly payments than Income Contingent Repayment.

In early 2010, the Obama administration's Middle Class Task Force recommended that Congress adopt New IBR to make the program more beneficial for middle-income borrowers.[22] President Obama subsequently supported it in both his State of the Union address and budget request to Congress that year.[23] A review of letters from advocacy organizations in support of the 2010 IBR changes suggests that they hoped the changes would target benefits to middle-income borrowers *and* increase benefits for struggling borrowers.[24] Congress' motivation for the change is difficult to determine because there is little evidence that lawmakers discussed it in depth. The provision was just one of many included in a broader package of education reforms included in the 2010 health care reform law.[25]

In 2011, when the Obama administration announced its PAYE plan, there was little specific focus on middle-class or low-income borrowers. Instead, the administration primarily focused on high college costs, public anxiety over student indebtedness, and historic levels of outstanding student debt. The administration did argue, however, that implementing New IBR sooner would benefit public service workers, particularly teachers.[26]

How New and Old IBR Work — Details and Discussion

Most accounts of how IBR works and how it affects borrowers are limited to one-year snapshots of a particular borrower. Illustrations typically show what a borrower with a certain income and debt load would pay for one month under IBR compared with the standard 10-year repayment plan. Examples meant to capture the longer-term effects of IBR have included major errors and incomplete information.[27] Furthermore, no detailed analysis is available that compares New IBR to Old IBR for different types of borrowers with varying debt loads over entire repayment periods. Policymakers and borrowers would benefit from a more comprehensive and long-term perspective of how IBR affects different types of borrowers, particularly as borrowers' incomes change over their repayment terms. This paper aims to provide such information.

> Policymakers would benefit from a more comprehensive and long-term perspective of how IBR affects different types of borrowers.

The New America Foundation developed a calculator that incorporates all of the components of Old and New IBR. It reveals in detail how much different types of borrowers are likely to pay monthly and over their entire repayment periods under both plans, tracks accruing interest, and calculates the amount of debt borrowers will have forgiven. It also compares borrowers' payments under Old and New IBR with those under the consolidation repayment plans, the other repayment option all borrowers have to extend their repayment terms and lower their monthly payments.

Using the calculator, we analyzed hundreds of scenarios for borrowers with a wide range of debt loads and income paths. This paper discusses the findings from those simulations and includes narrated examples for four hypothetical borrowers in Appendix I and tables for 10 supplemental examples in Appendix IV. Details about how the calculator works and assumptions we made in designing it are discussed in Appendix V. Before discussing the findings from those simulations, this paper explains each component of IBR and highlights some of the little-understood consequences that arise from each component, as well as how the component parts amplify, reduce, or target benefits to borrowers.

Qualifying for IBR

The law defines borrowers who are eligible for Old and New IBR as those who have a "partial financial hardship." A borrower has a partial financial hardship if the following calculation results in a loan payment that is below what she would be required to pay under the standard 10-year repayment plan. Under New IBR, a borrower's annual loan payment is equal to 10 percent of a borrower's adjusted gross income (AGI) after first deducting 150 percent of the federal poverty guidelines (a proxy for cost-of-living).[28]

Under Old IBR, the payment is calculated as 15 percent of adjusted gross income after the deduction.[29] The borrower's monthly payment is one-twelfth of that amount. Thus, IBR eligibility is based on a debt-to-income ratio measured against payments the borrower would make by paying fixed payments for 10 years. For example, if a borrower must pay $250 per month on her federal loans under the 10-year standard repayment plan, but under IBR her payment is $200, then she qualifies. As was discussed in the preceding section, borrowers are eligible for New or Old IBR based on when they took out federal student loans. More recent borrowers will temporarily be able to choose one or the other, but a borrower who took out a loan prior to July 1, 2008 is eligible only for Old IBR.[30]

Poverty or Cost-of-Living Income Exemption

A borrower's IBR payment is not calculated on his entire income. Instead, he is granted a cost-of-living exemption equal to 150 percent of the federal poverty guidelines published by the Department of Health and Human Services, which includes an adjustment based on household size and an annual inflationary increase.[31] The exemption is meant to exclude from a borrower's IBR payment calculation the share of his income that is used to provide basic living support. The exemption is the same under both Old and New IBR. For 2012, the poverty threshold for a family of one person is $11,170. For each additional family member, it increases by $3,960. Therefore, an unmarried borrower with no children would exclude $16,755 (150 percent of $11,170) from his income to determine the portion on which his IBR payment is calculated. An unmarried borrower with one child would exclude $22,695, and so on. A married borrower who files a separate federal tax return and claims the couple's child as a dependent on her return would be treated as an unmarried borrower with one child for purposes of calculating the IBR exemption. As is discussed later, this rule can greatly affect her payments under IBR.

IBR Is Calculated on Adjusted Gross Income

Most people describe IBR and its benefits by explaining what a borrower's payment would be based on his salary or total income. For example, a White House fact sheet on IBR illustrates that a teacher "earning $30,000 a year" who has $25,000 in federal student loans would pay $114 per month under New IBR.[32] The teacher's earnings are most likely meant to indicate her salary, and the IBR calculation in this example is based on that figure. However, under IBR, a borrower's payment is based on her adjusted gross income, which is likely less than her total income (i.e., salary, wages, tips, etc.) because she can contribute to pre-tax benefits and take above-the-line deductions.[33] The distinction between total income and AGI is important because even a borrower whose AGI is only slightly below her total income will make significantly lower monthly payments under IBR and increase the amount of unpaid principal and interest that can be forgiven. Conversely, in certain cases, it can cause borrowers to repay over longer periods of time, accrue more interest, and make higher payments overall than if their payments were based on their total income. The implications of using AGI to calculate a borrower's IBR payment should factor into a more comprehensive understanding of IBR's benefits, though they do not necessarily suggest that policymakers should base payments on some other measure.

Consider the AGI of the borrower in the White House example above. If she pays only $1,750 per year in pre-tax benefits through her employer—a teacher might contribute at least $500 per year toward health insurance premiums and $1,250 a year toward a pension plan—and then deducts $1,000 in student loan interest and $250 for classroom expenses, her AGI is $27,000, rather than $30,000. It is a minor difference, but it reduces her monthly payment under New IBR from the $114 cited in the White House example to only $85, a 25 percent decrease.[34]

The difference between total income and AGI also affects higher-income borrowers. They are more able and likely to take advantage of pre-tax contributions to retirement plans and other benefits, and thus will have AGIs that are substantially less than their total incomes.[35] Consider an example in which a borrower with $40,000 in loans earns an annual salary of $69,000, but has an AGI of $58,650 because he takes advantage of common pre-tax benefits through his employer and claims the student loan interest deduction.[36] His monthly payment under New IBR is $349, or $86 less than the $435 it would be if his IBR payment were calculated from his nominal salary of $69,000.

Separate Income Tax Filing

IBR does not require that a married borrower include his spouse's income in his adjusted gross income if he files his federal income taxes separately from his spouse's (married, filing separately).[37] Alternatively, a borrower enrolled in IBR who files his federal income tax jointly (married, filing joint return) would have his monthly student loan payment calculated on the combined adjusted gross income on the joint tax return. The separate filing provision allows a borrower who himself has a lower income, but belongs to a high-income household, to receive significant benefits under IBR.

For example, a borrower with $40,000 in federal student loans who earns a salary of $30,000 (AGI of $27,000) that increases with inflation each year, may file his income taxes separately from his spouse who earns $125,000 per year, so his monthly payments will be calculated on his income alone ($128 under Old IBR and $85 under New IBR). In doing so, he will accumulate a large unpaid balance ($55,292 under Old IBR and $66,670 under New IBR) that will be forgiven. Had his spouse's income been included in the IBR calculation he would not have qualified for IBR nor had any debt forgiven. If the same couple has two children and the borrower claims them as dependents on his tax return, he can exclude $28,635 from his income rather than $16,755.[38] He will pay nothing every month under either IBR and have all of his debt forgiven.

The IBR Maximum Payment Cap

If a borrower who initially qualifies for IBR and enrolls in the program later sees her income increase so that she no longer qualifies for its reduced payments, her payments will no longer be calculated based on her income. She may, however, remain enrolled in IBR, in which case her monthly payments would be equal to what they would have been had she elected to repay under the standard 10-year repayment plan when she first began repayment.[39] Thus, IBR effectively includes two types of maximum monthly repayment calculations: one based solely on income and the other based on the 10-year standard repayment rate for a borrower's original loan balance. The repayment cap ensures that a borrower in IBR will always pay a rate that is lower than, or equal to, the rate on the 10-year standard repayment plan.[40] Effectively, the cap ensures that once a borrower's income is high enough that he no longer qualifies for reduced payments under IBR, his payments will represent a declining share of his income.

Borrowers whose incomes increase so that they reach the monthly cap may exit IBR and choose to repay through consolidation, which will almost always lower their monthly payments but stretch out the repayment period. The program rules treat the borrower's loan balance at the point he switches as a new loan, so he is eligible for the full repayment term on a consolidation loan.[41]

Loan Forgiveness

For borrowers under Old IBR, any loan balance remaining after 25 years is forgiven.[42] Borrowers eligible for New IBR receive loan forgiveness after 20 years.[43] The amount forgiven under IBR includes any original principal balance that the borrower did not repay and any accrued, unpaid interest. A borrower may qualify for loan forgiveness regardless of her income at the time the forgiveness is provided.

Qualifying for loan forgiveness can be more complicated than it first appears. A borrower need not be presently enrolled in IBR or have been enrolled in it for the duration of his repayment to qualify for loan forgiveness. A borrower must, however, have been enrolled at some point. This is because any payments that a borrower makes that are at least as high as those in the standard 10-year repayment plan based on his original loan balance (which are also equal to those at the maximum repayment cap under IBR) are considered qualifying payments to meet the loan forgiveness threshold (20 or 25 years) if the borrowers was at one time enrolled in IBR.[44] Conversely, a borrower who leaves IBR and makes payments under consolidation that are lower than what he would pay under the 10-year standard repayment plan may not count the lower payments toward meeting the loan forgiveness threshold (20 or 25 years of payments) under IBR.

It is worth comparing the loan forgiveness terms under Old and New IBR with the maximum repayment terms under consolidation, the other option that allows borrowers with high debt loads to repay over longer terms and reduce their payments. Under consolidation, borrowers with $20,000 to $39,999 in loans can pay over 20 years; borrowers with $40,000 to $59,999 can pay over 25 years; and borrowers with over $60,000 can pay over 30 years.[45] Payments on consolidation loans are set—at a fixed rate or a graduated rate—such that the borrower will fully repay his loan over the term. Unlike IBR, however, consolidation does not provide loan forgiveness. Because Old IBR and consolidation both have 25-year repayment terms, borrowers with $40,000 or more in debt are likely to fully repay their loans, unless they have a persistently low income. New IBR, however, allows for loan forgiveness after 20 years, equivalent to the repayment term on consolidation loans of between $20,000 and $39,999, and therefore is very likely to allow borrowers with debt loads equal to or greater than $40,000 earning middle and high incomes to receive loan forgiveness before they would fully repay under consolidation.

Accruing Interest and Negative Amortization

IBR allows borrowers to pay less than the monthly accrued interest on their loans because their payments are based on the IBR formula, not loan balance, time, or interest rate.[46] If a borrower's monthly payment under IBR is $100, but her loans accrue $150 in interest each month, her loan balance that month actually grows by the amount of unpaid interest. This is called negative amortization.

As long as a borrower qualifies for reduced monthly payments under IBR, unpaid interest is never added to the original principal of the loans. In other words, the borrower is not charged interest on top of unpaid interest (i.e., compounding). But when the borrower's income is high enough to reach the payment cap under IBR, any unpaid interest is immediately added to the loan balance—it is "capitalized."[47] From that point forward, interest accrues on the unpaid interest. Also, when a borrower's income increases such that she is making monthly payments that more than cover the interest that accrues each month, the excess amount is first used to pay down unpaid interest from any prior month. If no unpaid interest remains, then the excess is applied to the loan principal.

Negative amortization and accruing interest generally increase the amount a borrower will pay over the life of the loan and extend the time over which he must repay.

Negative amortization and accruing interest generally increase the amount a borrower will pay over the life of the loan and extend the time over which he must repay compared with other repayment plans. This is true for borrowers in all income groups under Old IBR, except those who earn a low income for the majority of their repayment term—they will make low payments and have their loans forgiven so the effects are negligible. Under New IBR, the effects of accruing interest and negative amortization are more severe than Old IBR, but only for borrowers with less than $30,000 in debt. They will pay more and for longer than if they were eligible for Old IBR because their payments are lower—unless they earn a low income for most of their repayment.[48] Borrowers with more than $30,000 in debt under New IBR, on the other hand, are likely to be unaffected by greater accruing interest and negative amortization because they will have their outstanding loan balances forgiven before they would be required to pay it off.

Negative Amortization Protection on Subsidized Stafford Loans

Borrowers with Subsidized Stafford loans—a subset of federal student loans that is available to borrowers who meet income and cost-of-attendance criteria—are provided some protection against the effects of negative amortization under IBR.[49] If a borrower's payment is insufficient to pay the interest that accrues on a Subsidized Stafford loan each month, the payment is applied to the interest that accrued, but any unpaid portion is immediately forgiven. Therefore, his loan balance neither increases nor decreases. The protection is provided for three cumulative years of payments.[50]

It should be noted that Subsidized Stafford loans can make up a small portion of a borrower's loan balance. Unlike Unsubsidized Stafford loans, Subsidized Stafford loans are awarded to borrowers according to a sliding scale based on a family income and cost-of-attendance formula. Furthermore, annual and aggregate limits are less than the total amount of federal student loans undergraduates may borrow, and as of July 1, 2012, graduate students no longer qualify for the loans at all.[51]

Under Old IBR, the negative amortization protection can provide some benefits to borrowers who have the maximum amount in Subsidized Stafford loans and for whom those loans make up a large share of their loan balances. For borrowers with less than the maximum, or for whom Subsidized Stafford loans make up a small share of their loan balance, the provision provides minimal benefits. Separately, borrowers with Subsidized Stafford loans realize the benefits from this provision in the final years or months of their repayment schedule, regardless of when they earned a lower income and made low payments, because the provision only shortens the repayment schedule; it does not change a borrower's monthly payments.

For example, a borrower with $30,000 in loans, none of which are Subsidized Stafford loans, may have to pay her loans for 23 years under Old IBR. If $19,000 of her debt is Subsidized Stafford loans, the negative amortization protection means she will pay for only 21 years. The protection reduces her loan balance, so her repayment term is shorter by two years, but she makes *the same* monthly payments no matter which type of loan she has. That is because IBR bases her payments on her income, not her loan balance—which is what negative amortization affects. Thus, a borrower realizes the benefit that the protection provides only in her final years or months of repayment.

Under New IBR, the negative amortization protection on Subsidized Stafford loans is nullified for borrowers who have over $25,000 in total federal student debt. That is because a borrower whose income was low enough that her loans would have negatively amortized absent the protection is likely to have a remaining balance left on her loans after 20 years and have that balance forgiven at the same point she would have realized the benefits of the negative amortization protection. Therefore, under New IBR, Subsidized Stafford loans provide no extra benefit to borrowers. Borrowers with Subsidized Stafford loans are likely to make the same monthly and overall payments as an identical borrower who has only Unsubsidized Stafford loans.

Thus, under New IBR, the borrower from the example above who has $30,000 in loans would have her repayment shortened to 20 years (she receives loan forgiveness), but her total and monthly payments over those 20 years are unaffected by her loan type because she receives loan forgiveness before she would have benefited from the negative amortization protection on Subsidized Stafford loans. In other words, the negative amortization protection on Subsidized Stafford loans is redundant given New IBR's shorter loan forgiveness period for high-debt borrowers.

When a Borrower Leaves IBR

Borrowers with federal student loans are permitted to change repayment plans at any point during repayment.[52] This allows a borrower to effectively enter IBR at any point as long as she qualifies for a reduced monthly payment compared to the standard 10-year repayment plan. Under such a scenario, her loan payment would be recalculated according to the IBR formula and she would be eligible for loan forgiveness if she completed the required number of payments (those made under IBR, or payments made at any point that were at least as high as those on the standard 10-year repayment plan).

If a borrower leaves IBR (for any reason) and chooses any of the other repayment options available on federal student loans, any unpaid interest she accrued while repaying in IBR is immediately added to the principal balance of her loan. She effectively has a new loan balance, and the loan begins accruing interest on that amount.[53] For example, a borrower who begins repaying a $30,000 loan in IBR and underpays the interest that accrues each year by $500 will have a new loan balance of $32,500 if she leaves IBR after five years.

As noted earlier, some borrowers repaying through IBR may decide to switch to consolidation once their incomes increase in order to lower their monthly payments. A borrower will be eligible for the full repayment term on a consolidation loan based on his loan balance when he leaves IBR (which includes outstanding principal and accrued interest), allowing him to stretch out his payments further. But he may leave IBR with a loan that is larger than his original balance, due to negative amortization. That will make his monthly payments under consolidation higher than if he had chosen it initially. If his loan balance has grown a lot under IBR, his payments under consolidation may even be higher than the payments he is making under IBR. Furthermore, if he switches to consolidation after paying in IBR, he will pay more in total interest because he is extending his repayment term. And if his monthly payments under consolidation are less than the 10-year standard repayment plan, they do not count toward the number of payments he would need to make to qualify for loan forgiveness under IBR. Negative amortization and accrued interest can, therefore, make it costly for borrowers to leave IBR and make it impossible to lower their monthly payments if their incomes increase.

Loan Forgiveness Is Taxable

The amount of unpaid principal and interest that a borrower has forgiven under IBR is treated as taxable income under federal tax law, except for loan forgiveness granted as part of the 10-year public service loan forgiveness plan.[54] This tax provision can substantially reduce the value of loan forgiveness. In cases in which a borrower is unable to pay the full tax liability in one year, the Internal Revenue Service will impose penalty fees and interest charges on the unpaid amount, further eroding the value of loan forgiveness. A borrower in the 25 percent federal income tax bracket would owe $250 for every $1,000 of unpaid principal and accrued interest that the government forgives in accordance with IBR (provided the amount of loan forgiveness did not push his income into the next highest tax bracket of 28 percent). A borrower who has $20,000 in loans forgiven under IBR would have to pay $5,000 in additional income taxes that year. Because state income taxes generally apply to any income that the federal government taxes, borrowers who receive loan forgiveness would likely pay state income taxes on the amount as well. In a state with a flat 7 percent income tax, the same borrower would owe a combined $6,400 in state and federal income taxes.

How IBR Affects Different Types of Borrowers

The following section explains how both Old and New IBR affect different types of borrowers over their entire repayment periods and compares it with consolidation, the other option borrowers with high debt loads have to lower their monthly payments. It focuses on three groups of borrowers: lower-income borrowers who later go on to earn middle incomes; borrowers who earn middle incomes for the majority of their repayment terms, but temporarily earn a low income; and, high-debt borrowers who earn middle and high incomes. The findings in this section were developed using the New America Foundation IBR calculator. Details about the calculator are discussed in Appendix V.

Safety Net and Borrowers Who Transition to Middle Incomes

Old IBR

Based on the findings from the New America Foundation IBR calculator, Old IBR allows a lower-income borrower (earning less than $25,000 per year) to reduce his monthly payments compared with any other repayment option, but if he eventually earns a middle income (between $38,000 and $62,000), he generally has to make higher monthly and total payments and pay for longer under IBR than he would have had he initially chosen the consolidation option.[55] This happens because the monthly payments made under IBR when his income was low do not sufficiently cover the accruing interest, and his loan balance either grows or declines slowly (his payments cover all accruing interest but only a small amount of principal each month). On the whole, borrowers with moderate loan balances (between $15,000 and $25,000) who earn low incomes for several years but eventually earn middle incomes would extend their repayment periods and pay more over the life of the loan than if they had not made reduced payments under Old IBR.

Low-income borrowers who transition to middle incomes would generally be better off enrolling in the graduated consolidation repayment option initially if they can afford the marginally higher payments that the plan requires in their early repayment years. Graduated consolidation provides borrowers extended repayment terms and low initial payments that rise every two years, but initial payments are set high enough to cover all of the interest that accrues and a borrower must fully repay the loan under graduated consolidation; no loan forgiveness is provided. Therefore, borrowers can avoid the added interest costs that come with repaying through IBR.

New IBR

New IBR does little to enhance the safety-net function of IBR for borrowers who earn lower incomes at some points during their repayment. Both plans provide an identical cost-of-living exemption that lower-income borrowers are likely to exceed only by a few thousand dollars annually. Calculating payments based on 10 percent versus 15 percent of a borrower's income above the exemption changes a borrower's monthly payment by as little as $5 and not more than $20. New IBR does, however, provide more generous benefits to borrowers if and after their incomes increase—when they are most able to pay. A borrower who initially earns a low income but goes on to earn a middle income (between $38,000 and $62,000) will receive a larger reduction in monthly payments under New IBR compared with Old IBR than if his income remains low for his repayment term.[56] The earlier loan forgiveness provision under New IBR also makes it more likely that he will receive some loan forgiveness and limits his repayment period compared with Old IBR.

New IBR does little to enhance the safety-net function of IBR for borrowers who earn lower incomes at some points during their repayment.

This paper does not focus on how Old and New IBR affect lower-income borrowers whose incomes never increase, or whose incomes increase at a rate that does not exceed inflation, because the effects of IBR on this income group are predictable and straightforward—IBR provides these borrowers with significant payment relief and loan forgiveness because they earn low incomes throughout their repayment periods. It is the best of all the repayment options for this group. Indeed, IBR exists to help exactly this group of borrowers. Note that New IBR will provide these borrowers with marginally lower monthly payments compared with Old IBR, (as little as $5 and not more than $20); the 20-year loan forgiveness benefit is of relatively small value compared with Old IBR given that this group of borrowers would be making small monthly payments during those years under either formula.

See the Heather example in Appendix I for an illustration of these findings.

Middle-Income Borrowers

We put numerous borrower scenarios into the New America Foundation IBR calculator to examine how New and Old IBR affect middle-income borrowers. For this analysis we define middle-income borrowers as those whose initial incomes are temporarily low (between $25,000 and $33,000) but who quickly go on to earn middle incomes ($38,000 to $62,999) and ultimately high incomes ($63,000 and above) over their repayment periods.[57] As in our analysis for lower-income borrowers, we do not focus on middle-income borrowers whose incomes are static over their entire repayment terms—or whose incomes never increase faster than inflation—because the effects of IBR on these borrowers are straightforward. They will make declining or flat monthly payments over the course of their repayment terms. Compared with Old IBR, their monthly payments will be about $75 lower per month (AGI of $35,000) under New IBR and they will repay for 20 years rather than 25 before receiving loan forgiveness.

Old IBR

Overall, Old IBR provides middle-income borrowers with an option to make low monthly payments when they need the most help, but there are important trade-offs a borrower faces in choosing IBR compared with consolidation. For middle-income borrowers with federal student loan debt in a range of $20,000 to $35,000, Old IBR generally provides lower monthly payments in the first few years after leaving school than consolidation. However, it also results in higher monthly payments than consolidation in later years when a borrower's income is higher and therefore requires that he pays off his loans at an accelerated pace. These borrowers can switch to consolidation at that point to gain a lower payment, but that will cause them to pay more and for longer than if they had chosen that option initially, due to added interest payments.

Middle-income borrowers with larger amounts of federal student loans (between $35,000 and $60,000) are likely to face the same effects and trade-offs between Old IBR and consolidation as those with more moderate debt levels. However, with a higher debt load, accrued interest under Old IBR will almost always increase what a borrower would pay compared to consolidation, especially because all of the plans have 25-year terms.[58] That is, both require borrowers to pay over the same time frame, but the interest a borrower accrues under Old IBR will force him to pay more overall and make higher monthly payments later in repayment.

New IBR

Under New IBR, middle-income borrowers are unlikely to earn any additional benefit compared with Old IBR unless they borrow more than $25,000, which is approximately the average debt load for borrowers who obtain a bachelor's degree, and is near the $31,000 aggregate federal loan limit for dependent undergraduates.[59] In fact, middle-income borrowers with debt below that level end up paying more in total and for longer in New IBR compared with Old IBR because they increase the interest that accrues on their loans by making lower monthly payments. What's more, these borrowers will likely repay their loans fully over 20 years (and thus will not receive loan forgiveness), and will do so by making lower payments early on and higher payments later. As a result, New IBR closely mimics the graduated consolidation repayment option (which does not offer loan forgiveness) for these borrowers—they are likely to make similar monthly and total payments in both plans.

On the other hand, middle-income borrowers who enroll in New IBR with more than $25,000 in federal loans are likely to receive substantial benefits—including loan forgiveness—compared with Old IBR. For these borrowers, New IBR will almost always provide lower monthly and total payments than consolidation. Moreover, New IBR's lower monthly payments and 20-year loan forgiveness effectively eliminate the additional interest costs that a middle-income borrower incurs on each dollar he borrows over $25,000. Graduate students, who may borrow an unlimited amount of federal loans to pay for their educations, are likely to incur only a fraction of the additional cost (principal and interest) of each dollar they borrow over $40,000 and none of the additional cost once they have borrowed $60,000, if they earn middle incomes, or even high incomes, during repayment.[60]

See the Eric examples in Appendix I for an illustration of these findings.

High-Debt Borrowers with Middle and High Incomes

By design, IBR includes no nominal or absolute income threshold by which a borrower would be excluded from its benefits; eligibility is determined on a debt-to-income ratio. Therefore, a borrower can qualify for reduced payments and loan forgiveness under IBR if his debt load is high enough even if he initially earns a high income ($63,000 and above) or if he initially has a lower income ($25,000 or less) that rises rapidly over the course of his repayment term.[61] The most likely way that this group of borrowers could accumulate high amounts of federal student loans is by attending graduate or professional school. That is because the federal loan program imposes no limits on how much a graduate or professional student may borrow annually or in aggregate, but it imposes annual and aggregate loan limits for undergraduate students. Consequently, high-income borrowers with debt only from undergraduate studies would be unable to accumulate the high loan balances that would allow them to qualify for reduced payments and loan forgiveness under either IBR.

Old IBR

Under Old IBR, borrowers who earn high incomes over their repayment terms and have high amounts of federal student loans will benefit from IBR for short periods of time when their incomes are temporarily low. These borrowers are unlikely, however, to have any debt forgiven after their 25th year of repayment unless they have initial loan balances that exceed $125,000. If they do receive loan forgiveness, Old IBR ensures that they will have first made substantial interest payments and high monthly payments that are as much as double what they would pay under a fixed-rate consolidation plan with a 30-year repayment term. In short, Old IBR tends to reverse the benefits it provides as borrowers' incomes increase.

New IBR

New IBR transforms the program from one that provides temporary benefits for borrowers who will earn higher incomes but who may temporarily have lower incomes, to one that provides significantly reduced monthly payments for much of their repayment terms and substantial loan forgiveness. The main cause of such a large change in benefits is the shortened loan forgiveness time, but calculating the payment based on 10 percent rather than 15 percent of a borrower's income also contributes. The lower payment rate means a high-income, high-debt borrower can earn a much higher income before he must pay at the maximum rate.[62] Moreover, the difference between payments under Old IBR and New IBR is largest in absolute terms for higher-income borrowers. A borrower with an AGI that is only a few thousand dollars above the poverty exemption sees a reduction in her monthly payment of only a few dollars compared with Old IBR, but a borrower with an AGI of $85,000 sees a reduction in his monthly payments of $280 under New IBR.[63]

Higher-income earners also receive a greater benefit under New IBR than Old IBR when they reduce their AGIs. This group is most likely to take advantage of pre-tax benefits and deductions because they are most able to contribute to employer-sponsored health plans, take advantage of other pre-tax fringe benefits, and make retirement savings contributions, all of which reduce a borrower's income for purposes of calculating AGI. These borrowers would have received no benefit from having more of their income excluded from their AGIs under Old IBR because making lower loan payments means they accrue more interest and could repay for longer. It is a zero-sum transaction. New IBR's loan forgiveness at 20 years, on the other hand, allows these borrowers to receive forgiveness early enough that a borrower whose AGI excludes a significant amount of his total income will have a larger unpaid loan balance forgiven after 20 years of repayment.

See the Robert example in Appendix I for an illustration of these findings.

Discussion

High-Income, High-Debt Benefits

Perhaps the most important implication of New IBR is the significant windfall benefit that high-income, high-debt borrowers (income of $63,000 and above) are likely to receive under New IBR. The benefits that New IBR provides to this income group seem unnecessary given that Old IBR provided high-income, high-debt borrowers who temporarily struggle to repay their loans with the option to reduce their payments to a manageable level—and provided *significant* amounts of loan forgiveness in only rare and extraordinary circumstances. Moreover, New IBR provides the bulk of benefits to this income group when they receive loan forgiveness five years earlier than under Old IBR, the time when high-income borrowers are generally most able to afford to make payments on their loans. Many would consider that time period to be a borrower's "peak earning" years.

> Targeting large, per-student benefits to borrowers who attended graduate school—long after they have left school—should be a lower priority than aid for undergraduates.

On a related point, middle- and high-income borrowers are only able to capture significant benefits under New IBR if they borrow federal student loans to finance graduate and professional school. To the extent that federal student aid programs are meant to ensure greater access to postsecondary education for the most financially needy students, targeting large, per-student benefits to students who attended graduate and professional school—long after they have left school—should be a lower priority than targeting aid to undergraduate students. One could also argue that providing benefits to higher-income borrowers who have the most education is inequitable, given that these individuals tend to have higher incomes.[64]

Negative Amortization and Accruing Interest Matter

Another implication of Old IBR (and to a lesser extent New IBR) is the effect of negative amortization and accruing interest. The New America Foundation's IBR calculator and the examples included in the appendices show that for lower- and middle-income borrowers who have moderate amounts of debt, Old IBR will likely cause them to repay much more and for longer than they would under other repayment plans like consolidation.

Some borrowers may need the lower payments that only IBR provides, but others may have more financial flexibility to choose between IBR and consolidation. It is imperative that borrowers who can make such a choice understand that if they opt to pay through Old IBR (which may offer the lowest monthly payment initially) rather than consolidation, they will make higher monthly payments in later years and will likely end up paying more in the long run. In fact, these costs can be significant for middle-income borrowers with initial debt levels between $20,000 and $35,000. Given this information, borrowers may view Old IBR as a last-resort repayment option that entails financial risks in exchange for offering the lowest monthly payments. Thus, a borrower whose income and debt level allow him to pay through IBR may not necessarily *benefit* from Old IBR.

Borrowers eligible for New IBR who have debts greater than $20,000 face less risk from accruing interest and negative amortization because they will qualify for loan forgiveness before they end up having to repay accrued interest. Nevertheless, under New IBR the risk remains that some borrowers who have more than $20,000 in loans will pay more than under other repayment plans.

The Obama administration and some advocacy organizations want the U.S. Department of Education to promote IBR more.[65] Due to the effects of accruing interest and negative amortization, though, many borrowers who qualify for IBR may in fact be better off if they do not enroll or do so for only a year or two, provided they can afford payments under consolidation. Thus, rather than aggressively promote the benefits of Old IBR, the U.S. Department of Education and borrower advocates should promote the plan with caution, warning borrowers that, unless they earn a persistently low income, they almost certainly will pay more overall, pay for longer, and make higher monthly payments later in their repayment terms under Old IBR—and the Department should recommend Old IBR to borrowers only as a last-resort repayment option.

While basic information provided by the U.S. Department of Education includes a vague warning about this issue, it could be more specific about how and why borrowers pay more, how IBR can cause borrowers to make higher monthly payments than other repayment plans would offer later in their repayment terms, and how they may face financial consequences for opting to leave IBR later in their repayment terms.[66] Because negative amortization and accruing interest pose different degrees of risk for borrowers depending on whether they are eligible for Old or New IBR, the U.S. Department of Education and borrower advocates will need to tailor their explanations about the effects depending on the program for which a borrower is eligible.

Old IBR Is a Safety Net, While New IBR Provides Windfall Benefits

A third implication of the findings in this paper is that both Old and New IBR work as a safety-net option for borrowers who are struggling to repay, but New IBR provides only a marginal increase in those benefits since the cost-of-living exemption under both programs ensures that borrowers with low incomes have similarly low monthly payments. The earlier loan forgiveness under New IBR minimally reduces borrowers' total payments if they remain low-income over their entire repayment period. While New IBR provides those modest benefit increases for struggling borrowers, it simultaneously provides significant benefit increases for borrowers who do not need safety net benefits. Much of the increase in benefits will go to borrowers with graduate and professional degrees because they can borrow the most in federal loans, even if they ultimately earn high incomes over their repayment terms. Although other groups of borrowers—particularly those who earn middle incomes—will also benefit from New IBR, they will benefit most in their final years of repayment due to the shorter, 20-year loan forgiveness period, which is not the optimal time for the government to provide benefits to borrowers.

Under Old IBR, borrowers who use the program must "repay" their benefits by paying longer, or more per month, *if* their incomes increase over time. That is due largely to the loan forgiveness threshold of 25 years, but Old IBR also requires that they make higher monthly payments compared with consolidation or New IBR, which forces them to "repay" benefits when their incomes are higher. Thus, Old IBR provides benefits when borrowers need them, but also ensures that borrowers with loans from graduate and professional school who earn higher incomes cannot earn significant benefits. Additionally, it ensures that borrowers whose incomes were low temporarily, but who have gone on to earn higher incomes, do not receive large benefits when their incomes are highest.

Perverse Incentives for Institutions of Higher Education and Students

As detailed in the earlier sections of this paper, New IBR significantly reduces or eliminates the financial consequences a borrower would bear in incurring additional federal student loan debt once he reaches a debt level around $30,000—even if he expects to eventually earn a middle income or even a high income. Moreover, institutions of higher education have a disincentive to keep tuition, fees, and other costs low because New IBR means that their students will not incur all of those costs if they finance their educations with federal student loans. As the Heather and Eric Undergraduate examples in Appendix I in this paper show, borrowers who take out the maximum in federal student loans for a dependent undergraduate will receive substantial benefits from New IBR, including loan forgiveness, despite earning middle and high incomes for the majority of their repayment terms. Had they opted to borrow less, New IBR provides them with little or no benefit compared with Old IBR or other consolidation repayment. Institutions of higher education may also promote the significant increase in benefits under New IBR to prospective students in a way that makes their students less price-sensitive. Such a dynamic is likely to be most pronounced at high-cost graduate and professional programs where graduates may earn middle and high incomes, but due to their debt levels still have a high debt-to-income ratio. For example, a financial planning company currently promotes the benefit of IBR to graduates of high-cost law schools with an advertising campaign that reads, "STOP wasting your money on Student Loan Payments."[67] Such marketing activities will likely intensify once New IBR is widely available sometime in late 2012, when the U.S. Department of Education finalizes the regulations.

IBR Treatment Under "Gainful Employment" Must Be Reexamined

Lastly, the Obama administration may have to reevaluate its "Gainful Employment" regulations.[68] If implemented, these rules would prohibit certain programs from participating in federal student aid if their students have high debt-to-income ratios after they leave school and fail to repay their loans at a certain rate. Out of concern that

Old IBR would give schools and programs covered by the regulation a loophole, the Obama administration sought initially to treat borrowers enrolled in IBR unfavorably in its assessment of programs, but ultimately allowed a "safe harbor" that would treat up to 3 percent of a program's students repaying under IBR as repaying at a sufficient rate.[69]

It is reasonable for the Obama administration to be concerned that a program in which more than 3 percent of graduates go on to repay through Old IBR for an extended period of time is producing undesirable student outcomes; the value of the program is clearly questionable if too many borrowers need to use Old IBR to repay their loans. Old IBR, as this paper shows, is indeed a safety-net repayment option for struggling borrowers. But New IBR is not. It provides generous benefits, even to middle- and high-income borrowers with manageable debt loads. Thus, graduates opting to repay through New IBR will be availing themselves of the most generous and beneficial loan repayment plan. That should not be a proxy metric for a program that is graduating borrowers who are struggling to repay their loans. On the contrary, those borrowers may be financially capable of repaying higher amounts under consolidation or another option, but chose to repay under New IBR because it provides a large benefit with little risk of financial downside.

What's more, it is inconsistent to dissuade graduates of programs covered by the gainful employment regulations (most of which are at for-profit institutions) from using IBR while high-cost graduate and professional schools encourage their borrowers to enroll in IBR with impunity. In sum, New IBR is generous enough that the majority of borrowers who will use it should not be characterized as struggling. If the pending gainful employment regulation is implemented, the U.S. Department of Education will need to adjust the safe harbor threshold up to reflect a higher average IBR use once New IBR becomes available.

Recommendations for a Better IBR

Policymakers should consider changing New IBR to address many of the issues that we identified using the New America Foundation's IBR calculator and illustrated in this paper. These reforms would eliminate or reduce benefits for higher-income borrowers and ensure that IBR does not indemnify graduate and professional schools that charge high tuitions and the students who borrow federal loans to attend them. The proposed reforms would accomplish these goals while maintaining the enhanced benefits for lower-income borrowers that New IBR provides over Old IBR—and make them available to borrowers regardless of when they took out federal student loans. We used the New America Foundation's IBR calculator to develop these recommendations and tested them for numerous hypothetical borrowers. Appendix III includes tables for each of the borrowers discussed in Appendix I, but also includes an additional row that reflects how each borrower would be affected by an IBR based on the recommendations below (shown as "IBR Recommended" in the table).

Recommendation #1: *Maintain the lower payment calculation (10 percent of AGI) in New IBR, but only for borrowers with AGIs at or below 300 percent of the federal poverty guidelines ($33,510 for a household size of one).* Borrowers with AGIs above 300 percent will pay according to the Old IBR formula (15 percent of AGI).

Justification: This change targets the benefits of lower monthly payments under New IBR to lower-income borrowers only. Borrowers earning more, while still eligible for IBR, must make payments based on the Old IBR formula. While the savings that New IBR provides to lower-income borrowers are less than they are for higher-income borrowers, this recommendation would still allow borrowers who are the most likely to struggle to make payments with the added relief offered by New IBR. Additionally, by requiring borrowers with incomes above 300 percent of the federal poverty guidelines to make monthly payments based on 15 percent of their AGIs, it is much less likely that high-income borrowers will receive loan forgiveness. It also allows borrowers with lower incomes to benefit from the 10 percent rate that New IBR offers, but ensures that they will repay those benefits by paying at a higher rate if their incomes increase later.

Lastly, those borrowers with AGIs above 300 percent of the poverty guidelines will likely have total incomes that are markedly higher than their AGIs because they are able to make pre-tax benefit payments, contribute to retirement savings, and take larger above-the-line deductions. Imposing a higher payment calculation (15 percent of AGI) on these borrowers compensates for their significantly lower AGIs relative to their total salaries.

Recommendation #2: *Maintain the loan forgiveness threshold from New IBR (20 years), but only for borrow-*

ers whose loan balances when they entered repayment do not exceed $40,000. Borrowers with higher initial balances would qualify for loan forgiveness after 25 years of repayment, the same as under Old IBR.

Justification: Like the first recommendation, this proposal would maintain the more generous benefits of New IBR, but not for all borrowers. A two-tiered loan forgiveness system based on initial debt levels would keep the 20-year loan forgiveness targeted toward borrowers who have debt from undergraduate studies or moderate amounts of debt from graduate studies and who struggle to repay. By creating a longer loan forgiveness threshold for borrowers with debt levels above $40,000, this recommendation also reduces the tendency that New IBR has to provide loan forgiveness to high-income, high-debt borrowers when they are most able to make higher payments on their loans for a total of 25 years. This two-tiered approach would discourage graduate and professional schools that charge high tuitions and their students who borrow federal loans from using IBR as an indemnification tool.

Recommendation #3: *Eliminate the maximum payment cap*. Borrowers must always pay based on the IBR income formulas, no matter how high their incomes are. Additionally, borrowers may not opt to enroll in another repayment plan once enrolled in IBR.[70]

Justification: The maximum payment cap targets IBR benefits to higher-income borrowers either by reducing their monthly payments, increasing the amount of loan forgiveness they receive, or both. It can also increase the chances that a borrower earning a very high income (over $200,000) would qualify for loan forgiveness. Lastly, requiring that borrowers stay in IBR for the duration of their repayment term once they enroll will ensure that borrowers who used IBR when their incomes were low will pay commensurately higher payments should their incomes increase—this helps offset some of the initial costs the government incurred when the borrowers benefitted from low payments while their incomes were lower.

Recommendation #4: *The U.S. Department of Education and policymakers should be forthcoming about the negative consequences borrowers may face when repaying through IBR*. The Department should promote the consolidation repayment option as another alternative that borrowers have to reduce their monthly payments and extend their repayment terms, particularly given how similar IBR is to the consolidation repayment plans for many types of borrowers. The Department should provide borrowers with illustrative examples of how paying off their loans more slowly could increase what they pay and provide clear warnings. Private companies servicing federal student loans should clearly indicate to borrowers how much interest accrues on their loans when they repay through IBR and how that is likely to increase the repayment term and total interest costs they will pay. Policymakers should also make consolidation less onerous for borrowers; currently, it requires significant paperwork and effort to enroll.

Justification: Some policymakers and student aid advocates have promoted IBR with hardly a mention of the financial risks it poses for borrowers (those risks exist for Old IBR, the only plan in which borrowers have enrolled to date, though New IBR entails far less financial risk for borrowers with debt levels that exceed $20,000). Borrowers may save little per month under IBR and end up paying more and for longer due to the added interest costs. Borrowers do make a trade-off in choosing IBR over other repayment options, and loan servicers and the U.S. Department of Education should ensure that borrowers are informed of those trade-offs.

Recommendation #5: *IBR payments for a borrower who is married but files a separate income tax return should be based on the household's combined AGI*. The program currently allows borrowers to file separate income tax returns and use only the borrower's income to calculate payments under IBR. This policy should include an exception for cases in which both spouses are making payments on federal student loans under IBR. In that case, each borrower's loan payments should be based on one-half of household income.

Justification: Married borrowers with low individual, but high household, incomes can still qualify for IBR (including loan forgiveness) by filing a separate income tax return. If these borrowers also have children, they can significantly increase the benefits they earn under IBR by claiming the children as dependents on their own federal income tax returns since it increases their household size and the poverty exemption they receive under IBR. This provision is another way in which higher-income borrowers (based on household income) can qualify for generous benefits under IBR. Ending this provision will ensure that the program's benefits are targeted to borrowers who need the most assistance. The exception for couples in which each spouse is repaying a federal student loan will ensure that borrowers in a two-borrower household do not each have to make payments on their loans on their combined incomes—which would essentially be double-counting their incomes.

Recommendation #6: *Make loan forgiveness tax-free using budgetary savings that arise from the other recommendations outlined above.*

Justification: Federal tax law treats loan forgiveness under IBR (except when provided for public service employees) as taxable income. Borrowers who receive loan forgiveness (under an IBR that reflects the recommendations outlined here) will likely have experienced some degree of financial hardship. Therefore, they are also likely to struggle with what could be a relatively large tax bill in the year they receive loan forgiveness. If IBR is meant to aid this type of borrower, then it should not impose its own type of financial burden on them.

Recommendation #7: *Allow all borrowers to enroll in an IBR that reflects these recommendations*. Do not limit it to new borrowers. Use the savings that would arise if policymakers implemented all of the recommendations listed above to offset the incremental costs of this recommendation.

Justification: Old IBR is available to all borrowers, but Congress and the Obama administration have limited access to New IBR to more recent borrowers to reduce the cost of the program. The recommendations outlined above would preserve some of the benefits of New IBR, but target them to those borrowers with more financial need, thereby reducing the cost. The recommendations would further reduce costs by limiting benefits to higher-income borrowers compared to even Old IBR. Therefore, policymakers could open the program to all borrowers at little or no incremental cost to taxpayers, and a greater number of borrowers would gain access to lower repayments and earlier loan forgiveness.

Appendix I: Narrated Borrower Examples

Heather's Loans: Old IBR

Heather comes from a middle-class family in Michigan and was a good student in high school. She attended Adrian College in Michigan, ranked 26th in *U.S. News & World Report*'s best regional colleges in the Midwest, lived at home to save money, and covered some of the $15,156 in annual tuition costs with grants and scholarships, but to cover the difference she borrowed the maximum amount in Unsubsidized Stafford loans for dependent undergraduates.[71] She graduated with an outstanding balance of $31,352 in federal loans at a 6.875 percent fixed interest rate.[72]

Heather earned a degree in business administration and wants to pursue a career in sales and marketing. But after an unsuccessful job search her senior year, she takes a job as an administrative assistant earning $22,000 her first year after graduation.

Heather has some options to repay her student loans. She could choose the standard 10-year repayment plan at $362 a month, but that seems a bit difficult given her monthly take-home pay of $1,500. She could choose graduated consolidation with an initial monthly payment of $180 that would increase every two years and let her spread payments over 20 years. A third repayment option is IBR. Given her salary of $22,000 and an AGI of $19,800 (she deducts her student loan interest, pays her health insurance premiums pre-tax, and contributes to a health care flexible spending account), she would pay $38 per month.

Ultimately, Heather chooses IBR because it gives her the most manageable monthly payments. At $38 per month, however, her payments are not enough to cover the interest that accrues on her loans. That means her loan balance grows, though the unpaid interest is not added to her principal at this point—she is not being charged interest on the interest.

After her second year as an administrative assistant, Heather is laid off and now her income is only $1,000 in monthly unemployment insurance benefits. That means under IBR, she won't make any student loan payments. Her AGI is below the $17,607 (150 percent of the federal poverty guidelines) she can deduct from her income under IBR. Thus, by her third year in IBR, Heather hasn't made a payment on the principal balance of her loan, and her original balance of $31,352 is now $36,833.

Following a year of unemployment and job searching, Heather gets a job as an inside sales representative with IBM in Atlanta, Georgia. Her starting salary is $34,000 (AGI $30,600).[73] Heather stays enrolled in IBR and pays $157 per month.

In the next few years, her salary increases by 4 percent annually, and by her seventh year of repayment, when she is earning $38,245 (AGI $34,421), she is finally paying more on her loans each month than the interest that accrues. But she is still not paying down the principal because before any of her monthly payment reduces her principal balance, she first has to pay off all of the interest accrued in earlier years when her payments were low.

Heather continues to work at IBM for many more years and gets a promotion in her ninth year of repayment (salary of $48,000 and AGI $43,200), which makes her payment under IBR $285 per month. Heather really would prefer not to make loan payments based on her income now that she is earning a good salary, and she checks with her loan servicer about her options.

She is surprised to learn that she cannot significantly reduce her payments at this point by switching to consolidation because her initial loan balance of $31,352 has grown to $36,983. Her monthly payments would therefore be $283 on a new 20-year loan of $36,983, rather than the $241 per month it would have been had she chosen consolidation when she first started repayment. Moreover, opting into consolidation at this point would make her total repayment term 29 years (nine years in IBR and 20 in consolidation). Heather knows that after 25 years of payments in IBR any outstanding balance will be forgiven, so choosing consolidation at this point guarantees she will pay for longer than if she sticks with IBR. Weighing those facts, Heather remains in IBR.

In her 14th year of repayment she is promoted to Inside Sales Manager and gets a pay bump to $62,500 (AGI $56,250). At that salary level, her payments under IBR hit the maximum cap, or $362 a month, the same amount she would pay over a 10-year repayment plan on her original loan balance. At a rate of $362 per month, Heather begins rapidly repaying her loans. Heather is married at this point, but does not have children, and files her income taxes separately from her husband so that her loan payments are based only on her income. Each year Heather continues to earn a salary increase, but she never has to pay more than $362 per month on her loans due to the cap. She pays that amount from her 14th year to her 23rd year of repayment, at which point she makes the final payment on her loans.

In total, she pays $70,210 in principal and interest and receives no loan forgiveness because she repaid before she reached the 25th year. Had Heather repaid under the graduated consolidated plan over her entire repayment, she would have paid less overall ($63,201) but her monthly payments in those early years when she was earning a lower salary would have been $180 instead of $38 under IBR, a noticeable difference. But the initial payment relief IBR provides Heather in her early years comes with a trade-off. Under IBR, she pays for three years longer than under graduated consolidation, and for most of her later repayment (years nine through 18) her monthly payment under IBR was as much as $75 higher than if she had repaid using graduated consolidation. Still, Heather needed the help that the lower payments under IBR provided her early on, which to her made the higher payments she paid later seem like a fair trade-off.

Heather's Loans: New IBR

Now consider what Heather would pay if she were eligible instead for New IBR. New IBR provides a much bigger benefit for Heather, except that the larger benefits compared with Old IBR accrue to her mostly when she is earning a higher salary, not when she is earning a lower salary. Under New IBR, Heather's monthly payment in her first year will be $25, as opposed to $38 under Old IBR. The difference is small because her AGI in that year is $19,800, and after the poverty exemption of $16,755, she has only $3,045 in earnings subject to IBR. With so little income above the exemption, payments based on 10 percent versus 15 percent are only marginally different.

In her second year, New IBR drops her monthly payment to $29 from $44 under Old IBR, still a small difference when she is earning $23,000 (AGI $20,700). In her third year, when she is unemployed, she pays $0 under either plan because her income does not exceed the poverty exemption. All in all, New IBR adds little to the safety-net benefit that Old IBR already provided her.

When Heather's income starts to increase after her third year of repayment, New IBR begins to provide more meaningful benefits compared with Old IBR. For example, in year 10, her salary is $49,920 (AGI $44,928), making her monthly payment $200 under New IBR, instead of $300 under Old IBR. In year 13, when her salary is $56,153 (AGI $50,538), her payment is $233 under New IBR instead of $350 under Old IBR. In other words, as her income increases, the benefits she receives under New IBR compared with Old IBR also

Heather: Starting Balance: $31,352 at 6.875%

Repayment Year	1	3	5	10	15	20	23	Total Payments	Forgiven
Salary ($)	22,000	12,000	35,360	49,920	65,000	71,400	75,240		
IBR Old ($)									
Monthly payment	38	-	167	300	362	362	362	**70,210**	-
Loan Balance	33,051	36,833	37,263	34,280	23,837	8,318	-		
IBR New ($)									
Monthly payment	25	-	111	200	290	282	-	**45,393**	**29,020**
Loan balance	33,203	37,161	38,885	40,489	36,492	29,020			
20-Year Consolidation ($)									
Monthly payment fixed	241	241	241	241	241	241	-	**57,574**	-
Monthly payment graduated	180	194	210	246	311	363	-	**63,201**	-

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Heather has no children.

grow. So as Heather begins to enter the middle class, she receives more benefit from New IBR relative to Old IBR.

The increased benefits Heather receives under New IBR make it by far the most generous repayment plan she could choose. Compared with graduated consolidation, Heather's monthly payment under New IBR is lower in every year of repayment, and she pays over 20 years under either plan. Because Heather's monthly payments are lower under New IBR, her loan balance is growing faster each year, so that her original loan balance of $31,352 reaches $40,854 in her eighth year of repayment. It is not until year 19, when she is earning a salary of $70,120 (AGI $63,108) that she makes a payment that reduces her principal balance. Until then, she was paying only the accruing interest.

The slow progress she has made paying down her loan might prompt her to make larger payments in her later repayment years, especially since she has the financial means to do so, but under New IBR that would be of no financial gain for her.[74] After 18 years of payments, she is just two years away from her 20th repayment year, after which any outstanding balance on her loans is forgiven.

When Heather concludes her 20th year of repayment she will have paid $45,393 in principal and interest on her loans, but still have a balance of $29,020 that is then forgiven. That year she earns a salary of $71,400 (AGI $64,260). Under New IBR, that balance is forgiven.

Income taxes will, however, take a bite out of the benefit she receives from loan forgiveness. The $29,020 in loan forgiveness will push Heather into the 25 percent income tax bracket based on her income at the time, and her state income tax rate will be 5 percent.[75] She will therefore owe $8,706 when she files her income taxes, the equivalent of making more than two additional years of payments on her loans under IBR, but due all at once.

Eric's Undergraduate Loans: Old IBR

Eric attended New York University, where he received a bachelor's degree in English. He received a large scholarship that covered most of the $61,907 in annual tuition and other costs, and had some financial help from his family, but he still needed to borrow $4,000 in Unsubsidized Stafford loans for each of his first two years and $5,000 in each of his last two years—well below the maximum allowed through the federal student loan program. The interest on Eric's loans accrues while he is in school and he graduates with a $20,924 loan balance with an interest rate of 6.875 percent.[76]

Having worked at his college newspaper all four years, Eric is hired as a journalist immediately after graduation, earning a starting salary of $25,000 (AGI $22,500). If he chose to repay his federal student loans under the standard 10-year plan, he would need to pay $242 per month. Eric could also choose to repay under the graduated consolidation plan with an initial monthly payment of $120, and his monthly payment would rise gradually every two years over 20 years. Eric also has the option to repay under Old IBR at just $72 per month in his first year, based on his AGI.

Of course, choosing a repayment plan is more complicated than comparing initial monthly payments. If Eric chooses the standard repayment, he pays his loan in the shortest amount of time, but the $242 monthly payment will be a challenge for him in his early years when he isn't making a large salary and is working in a large city. IBR clearly offers the lowest monthly payment, but the payment is lower than the $120 in interest that accrues each month, so Eric's loan balance will grow. Ultimately, Eric enrolls in IBR to get the lowest monthly payment possible.

In his third year after graduation, Eric gets a new job with another newspaper and his salary increases to $35,000 (AGI $31,500). Now he pays more per month under IBR ($174) than he would have been paying under consolidation ($161). Then, when Eric receives a job offer the next year from a public relations firm, his salary jumps to $50,000 (AGI $45,000). At that income, Eric's monthly IBR payment is capped at $242 a month, the same as if he had repaid his initial loan balance on a 10-year repayment term. Even if his income increases further, his payments can never go above that amount.

At this point, had Eric been repaying under graduated consolidation, his monthly payment would be $130, much lower than under Old IBR. Eric could always leave IBR for consolidation when his income and payment jump, but that option is not as good as it might first seem.

During his first three years of loan repayment under IBR, Eric hasn't made any progress in paying down his original loan balance. His loans accrued more interest than he paid off in the first two years of repayment; and in his third year, even though he earned more and made monthly payments that more than covered the accruing interest, the excess went to pay down the interest he had accrued earlier rather than to pay his principal. So at the start of year four, his principal balance is $21,090, slightly more than his initial balance. If he opts to repay through consolidation at this point, his monthly payment ($162) would be a dollar more than if he had chosen to repay in consolidation initially, but the loan will carry a new 20-year repayment term. That will make his total repayment term 23 years (3 years in IBR, 20 years in consolidation) and it will increase the total amount he pays by about $4,149 compared to what he would have paid if he had chosen consolidation initially because he will accrue more interest as he extends his repayment term.

Even so, Eric might consider switching to fixed-rate consolidation to lower his monthly payment at this point and make higher payments as his budget allows. He can always re-enroll in IBR if his income drops in the future. But Eric stays in IBR anyway because the thought of repaying his loans over a total of 23 years is troubling and he is comfortable making the higher payments in IBR.

For the next eight years, Eric earns a 4 percent annual raise, and in year 11 he is earning $65,797 (AGI $59,217). Eric and his wife have a child in years five, nine, and 11 of his repayment schedule. He files his income taxes separately from his wife, but claims all three children as dependents on his tax return. His three children increase the poverty exemption he can claim under IBR. Therefore, despite having a higher income in year 11, his monthly payment under IBR drops to $184, below the maximum repayment cap for the first time since year four.

At the start of year 12, Eric is promoted and his salary increases to $80,000 (AGI $72,000), and it increases by 4 percent annually thereafter. At that income level, his monthly payment under IBR jumps back to the capped maximum of $242 per month and he repays his loans at a fast pace, much faster than if he had chosen fixed-rate consolidation earlier in his repayment term. In fact, he could opt into consolidation at this point with a loan balance of $6,962 and payments of only $80 a month, but he would do so over a new 10-year repayment term. Eric wants to pay off his loans faster than that, so he stays in IBR. By year 14, Eric makes the last payment on his loans.

In total he pays $34,410. Alternatively, had Eric chosen fixed-rate consolidation for his entire repayment term, he would have paid more ($38,558) and for longer, but made monthly payments that were as much as $81 lower than under IBR for all but the first two years of repayment, giving him more flexibility in his monthly budget. In other words, IBR costs Eric less than consolidation only because it forces him to repay his loan faster with higher monthly

Eric Undergraduate: Starting Balance: $20,924 at 6.875%

Repayment Year	1	3	5	10	14	18	20	Total Payments	Forgiven
Salary ($)	25,000	35,000	52,000	63,226	86,528	101,226	109,486		
IBR Old ($)									
Monthly payment	72	174	242	242	242	242	-	**34,410**	-
Loan Balance	21,501	21,090	18,092	8,596	-	-	-		
IBR New ($)									
Monthly payment	48	116	181	175	242	242	-	**39,750**	-
Loan balance	21,778	22,473	20,483	15,462	10,690	-	-		
20-Year Consolidation ($)									
Monthly payment fixed	161	161	161	161	161	161	161	**38,558**	-
Monthly payment graduated	120	130	140	164	192	224	243	**42,180**	-

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Eric has a child in each of years five, nine, and 11, included in calculation thereafter.

payments—an option that is available in consolidation, too, since he can always make extra payments whenever he wants. Effectively, under IBR Eric pays the maximum rate as defined by standard repayment for 10 years, and makes four years of reduced payments, for a total 14-year repayment term.

It is also worth noting that IBR affects Eric in a similar fashion when he has an even larger loan balance, but those effects are amplified. Repaying through Old IBR would greatly increase how much Eric pays compared with fixed-rate consolidation had he borrowed the maximum in federal student loans (the maximum would be $31,352 at the start of his repayment), instead of borrowing slightly less. His loans accrue significantly more interest, causing him to pay $59,526 over 18 years in IBR versus the $57,774 he would pay under fixed-rate consolidation over 20 years. His payments under IBR will also be higher than under fixed-rate consolidation when he is earning more in his later years.

Eric's Undergraduate Loans: New IBR

Eric's narrative is somewhat similar if he is eligible for New IBR. His payments are lower by 33 percent every year, but those lower payments come at a price. Eric's monthly payments compared with Old IBR are marginally lower in his early years (about $24 per month less) and the reduction reaches about $60 when his income is higher around year five, which means he is accruing interest on his loans at a much faster rate than under Old IBR. It will take him 18 years to repay his loans, not the 14 it took him under Old IBR, and he will pay much more on his loan ($39,750 in total) than under any other repayment option except 20-year graduated consolidation. In fact, New IBR forces him to make *higher* monthly payments than he would under fixed-rate consolidation in every year of repayment except in his first three (and in year 11, when he has his third child but has not yet received a big salary increase), and he still pays less overall ($38,558) in fixed-rate consolidation.

If Eric opts to start in New IBR, but switches to fixed-rate consolidation at year four when he gets a big salary raise, his monthly payment would drop to $162, just like under Old IBR. But there is an important difference. Switching to consolidation after three years in New IBR would make his repayment term 23 years in total. But New IBR offers loan forgiveness after 20 years of payments, so Eric would be inclined to remain in IBR rather than opt to make lower monthly payments in exchange for three extra years of repayment.

It is worth noting that New IBR and graduated consolidation are comparable for Eric only because he borrows less than the maximum. Consider how differently New IBR would affect Eric if he had decided to borrow the maximum amount in federal student loans, leaving him with a $31,352 balance at the start of his repayment. He would pay a total of $50,653 and have a balance of $22,822 forgiven after 20 years of repayment. Graduated consolidation would have him pay a total of $63,201, because he would pay more every month than under New IBR and repay within 20 years (consolidation does not provide loan forgiveness). In essence, under New IBR, Eric would pay only half of the incremental cost of the additional $9,000 in federal loans he borrows to reach the maximum. Note that in the year that his loans are forgiven through New IBR, Eric is earning $109,486 (AGI $93,063).

Eric's Graduate School Loans: Old IBR

Now consider Eric's situation if instead of taking that journalism job right out of college, he enrolled in graduate school and followed a slightly different career path where he earns a higher income. The outcome for Eric under Old IBR when he attends graduate school is similar to the scenario in which he only has debt from undergraduate studies. Essentially, IBR functions much like the consolidation repayment options, but provides lower initial monthly payments and higher monthly payments later.

Eric enrolls in a master's of English literature program at a public university. To cover tuition and other costs, he takes out $15,000 in Unsubsidized Stafford loans per year for the two-year program (below the $20,500 annual maximum). Those loans add to what he borrowed for undergraduate studies, so he leaves graduate school with a combined balance of $56,432 at an interest rate of 6.875 percent.[77]

Eric then lands a job in publishing as an editorial assistant, earning $33,000 a year (AGI $29,700). To repay his federal student loans under the standard monthly repayment, Eric would have to pay $652 a month. Under graduated consolidated repayment, he would pay $323 a month for his first two years, with increasing payments every two years over a 25-year repayment period. Under Old IBR, he would pay only $162 a month his first year, with the opportunity to have any remaining debt forgiven after 25 years. Eric enrolls in IBR because it provides the lowest monthly payment initially.

In his fourth year of repayment, Eric gets a big promotion to copy editor, with an increase in salary to $53,750 (AGI $48,375), almost $20,000 more than the previous year. His monthly payment jumps from $181 under Old IBR to $379, slightly more than the $338 he would have been paying under graduated consolidation. At the start of year five, Eric's original loan balance has grown to $61,226 because he has not paid all of the interest that has accrued on his loans since he began repaying.

Eric receives an annual raise of 4 percent, until his 12th year of repayment when he is promoted to managing editor, with a salary of $112,200 a year (AGI $95,370). He receives annual raises of 4 percent thereafter. In year 13, he hits the maximum repayment cap under IBR and must pay $652 a month. He would have been paying $424 at that point had he chosen graduated consolidation initially.

Of course, Eric could leave IBR when his salary jumps and he pays $652 per month and instead repay through consolidation to lower his payments, but he would end up paying his loans for a total of 36 years, which is undesirable.[78]

Given his income in his 13th repayment year, IBR requires that he make the maximum monthly payment ($652) from his 13th to 21st years of repayment, high enough so that he pays off his loan three years before he would have qualified for loan forgiveness under Old IBR.

He pays a total of $120,516. Under graduated consolidation he would have paid $128,570 over 25 years and made lower monthly payments than under IBR in all but four years. Under fixed-rate consolidation, he would have paid $118,308, less than under IBR, and would have paid a fixed monthly rate of $394, a lower monthly payment than under IBR for the majority of the repayment period.

Eric's Graduate School Loans: New IBR

Old IBR may have provided Eric a useful and flexible way to repay his undergraduate and graduate school debt, but it required Eric to weigh its potential costs against other repayment options, assuming he was fully aware of his options. New IBR, on the other hand, has no financial downside for Eric. Because New IBR provides lower monthly payments and a shorter repayment term than consolidation (due to loan forgiveness after 20 years of payments), it is all but certain to be the best repayment option. And Eric's higher income in his middle to later years of repayment—by year 12 he is earning $112,200 (AGI $95,370)—does not prevent him from benefiting substantially from New IBR.

Conversely, the benefits of New IBR compared with Old IBR are modest but not insignificant when Eric's income

Eric Graduate: Starting Balance: $56,432 at 6.875%

Repayment Year	1	4	8	12	20	22	25	Total Payments	Forgiven
Salary ($)	33,000	53,750	77,550	112,200	153,553	166,083	186,821		
IBR Old ($)									
Monthly payment	162	379	535	622	652	652	-	**120,516**	-
Loan Balance	58,370	61,226	58,346	50,054	5,339	-	-		
IBR New ($)									
Monthly payment	108	253	356	415	623	-	-	**85,564**	**48,077**
Loan balance	59,017	64,801	68,054	67,906	48,077	-	-		
25-Year Consolidation ($)									
Monthly payment fixed	394	394	394	394	394	394	394	**118,308**	-
Monthly payment graduated	323	338	370	405	485	508	556	**128,570**	-

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Eric has a child in each of years five, nine, and 11, included in calculation thereafter.

is low. In his first year of repayment, his monthly payment drops by $54 to $108. By his fifth year of repayment when he is earning $55,900 (AGI $50,310) and has one child, his monthly payment is $210, which is $105 less than under Old IBR and almost half what it would be under fixed-rate consolidation with a 25-year repayment term had he chosen that plan initially. When he receives his promotion to managing editor in year 12 of repayment and is earning $112,200 (AGI $95,370), his payment is $415, which is $207 less than under Old IBR. In fact, under New IBR, his payments are set low enough that he does not make a principal payment until his 18th year.

Due to low monthly payments and accrued interest, Eric has a remaining balance of $48,077 after 20 years in IBR. That unpaid balance is then forgiven. In that year, his salary is $153,553 (AGI $130,520). In total, he pays $85,564 over 20 years under New IBR. Under graduated consolidation, he would have paid $128,570 over the course of 25 years. Under fixed-rate consolidation, he would have paid $118,308.

New IBR also changes Eric's option to leave IBR and repay through consolidation to lower his payment when his income rises after year 11. Under New IBR, his payment increases to $415 per month at that point, but because his loan balance has grown to $69,004 due to negative amortization, switching to consolidation would not lower his payments. A consolidation loan at that point would carry a new 30-year term with a monthly payment of $453. Eric is trapped in IBR, but the higher payments it requires that he make will be well worth it when his $48,077 remaining balance is forgiven.

Robert's Law School Loans: Old IBR

Robert attended California Western School of Law a few years after earning a bachelor's degree from UC-Riverside in California. He borrowed $5,000 in federal student loans to pay for his undergraduate studies and made large prepayments on the loans when he worked at a law firm so that he would enter law school without any debt from his undergraduate studies.

U.S. News & World Report does not publish a ranking for California Western School of Law, which puts it in the bottom fourth of all law schools.[79] The school lists an annual cost of attendance just under $68,000 and notes that the average starting salary for an employed graduate in a private practice is $62,000.[80] The federal student loan program allows students enrolled in graduate and professional programs to borrow up to the full cost of attendance as determined by the school itself, with no aggregate limit. Although Robert could borrow nearly the full $68,000 each year he attends the school, he borrows only $35,500 a year for each of his three years because he has some other financial resources and plans to live frugally while in school. That means Robert graduates with $121,974 in federal student loan debt from law school alone with an interest rate of 7.375 percent.[81]

Following graduation, he quickly finds a job in a small private practice with a starting salary of $65,000 (AGI $58,500). That is a little over the average starting salary for graduates from his school, but Robert was an above-average student.

Robert has a few choices to start repaying his $121,974 in federal student loans. He could pay $842 a month under fixed-rate consolidation with a 30-year repayment schedule, $750 for the first two years of repayment under graduated consolidation with a 30-year repayment term (payments will increase every two years), or $522 per month under Old IBR with loan forgiveness after 25 years if he has any outstanding balance. Robert chooses to enroll in IBR because it provides him with the lowest monthly payment and it offers loan forgiveness after 25 years, which is five years earlier than he would repay under the consolidation options.

In his third year with the firm, he gets a small raise, but in year five he takes a new job with a starting salary of $80,000 (AGI $68,000). That year he also is paid $20,000 for some onetime consulting work. That year, his monthly payment under IBR jumps to $831. That is the first year in which his payment under graduated consolidation would have been lower ($788) than his IBR payment, had he chosen that option initially. But Robert knows that his income will be lower next year without the contract work and IBR will again provide him with the lowest possible monthly payment, so he stays in IBR.

Robert also no longer has the option to lower his monthly payment by opting into the fixed-rate consolidation repayment plan; he is trapped in IBR.[82] In fact, Robert will not gain a lower monthly payment by switching to consolidation until his 11th year of repayment, but opting into consolidation at that point means he will have a new consolidation loan with a new 30-year term. Combined with the time he repaid through IBR, his total repayment term would be 41 years with total payments of $416,439 (which is $74,346 in IBR plus $342,093 in consolidation). Furthermore, leaving IBR seems like a bad choice for Robert because he would qualify for loan forgiveness by his 25th year if he remains in IBR, rather than make payments for 41 years. Thus, even though IBR does not provide him with the lowest monthly payments, the lower payments he could make under consolidation provide him with no financial advantage.

Over the next several years, Robert does well at the new firm and gets a series of salary increases. He gets married in his eighth year of repayment, but files his taxes separately from his wife so that their combined income is not used to calculate his payments under IBR. (Robert's wife has no student loans and earns a salary of $75,000.) By his 10th year of repayment he is earning $93,589 (AGI $79,550), and that year his first child is born. Robert continues to file his federal income taxes separately from his wife, but claims his child as a dependent on his return, thereby increasing the cost-of-living exemption that is factored into his student loan payment under IBR. In year 10 of his repayment, he pays $639 per month under IBR.

In his 11th repayment year, Robert takes a new job with a salary of $120,000 and collects a signing bonus of $20,000 for a combined income of $140,000. Based on his new AGI of $133,000 that year, his monthly payment spikes to $1,298 from $639 the previous year. Had Robert chosen fixed-rate consolidation initially, his payment would be $842 at this point, or $848 under graduated consolidation.

Robert makes his first principal payment on his loans in his 15th year of repayment, having at that point paid off all of the interest he accrued when he was making lower monthly payments in the first 10 years of his repayment. Now that his salary is $134,984 (AGI $114,736), his monthly payment under IBR is $1,032, which means he will pay off his loan at a rapid pace as his income rises steadily each year by 4 percent. In year 20 when he's earning a salary of $164,228 (AGI $156,017), his IBR payments are capped at $1,440 a month, the 10-year standard repayment rate based on his original loan balance. Because of that cap, he does not quite pay off his loan by his 25th year of repayment even though that year he is earning $199,809 (AGI $189,818). Robert still owes $22,867, but he has paid for 25 years so that amount is forgiven.

In total, Robert pays $297,766 in principal and interest over those 25 years. He would have paid slightly more under fixed-rate consolidation ($303,280), spread out evenly over 30 years, and he would have paid much smaller monthly payments in his later years of repayment than under IBR. But IBR was a good choice in that he was able to lower

Robert Law School Grad: Starting Balance: $121,974 at 7.375%

Repayment Year	1	3	5	10	15	20	25	30	Total Payments	Forgiven
Salary ($)	65,000	67,000	100,000	93,589	134,984	164,228	199,809	243,098		
IBR Old ($)										
Monthly payment	522	534	831	639	1,032	1,440	1,440	-	**297,766**	**22,867**
Loan Balance	124,708	130,396	131,775	137,584	120,623	86,162	22,867	-		
IBR New ($)										
Monthly payment	348	356	554	426	688	996	-	-	**141,350**	**160,536**
Loan balance	126,795	136,384	143,501	162,366	166,051	160,536	-	-		
30-Year Consolidation ($)										
Monthly payment fixed	842	842	842	842	842	842	842	842	**303,280**	**-**
Monthly payment graduated	750	768	788	828	891	936	1,008	1,060	**324,868**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Robert has one child in year 10 who is included in calculation thereafter.

his monthly payments in his first three years of repayment when he was just starting his law career in exchange for having to make higher payments later on when his income was high—and he was assured of not having to repay past 25 years due to loan forgiveness.

Robert's Law School Loans: New IBR

Under New IBR, Robert receives a significant windfall benefit compared with Old IBR and any other repayment option available to him. Even though Robert is earning what many would consider a good income in his early years of repayment, New IBR cuts his payments by about $175 compared with Old IBR. When his income is higher, the reduction is even greater. For example, when he earns $100,000 (AGI $85,000) in his fifth year of repayment, New IBR allows him to pay $277 less per month than he would under the Old IBR plan. The more his income goes up, the more New IBR reduces his payment compared to Old IBR.

Lower monthly payments cause Robert's loans to negatively amortize at a rapid rate. He is paying off less than half of the interest his loan accrues each month in his first four years under New IBR, such that by the end of his fifth year in repayment his balance has ballooned to $143,501 on an initial balance of $121,974. At the end of year 10, Robert's loan balance will reach $162,366. Yet during this time, Robert has been earning what many would consider a high salary and could have afforded higher payments—but Robert has little financial incentive to make higher payments on his loans than is required. Between years five and 10 of his repayment plan, his salary averages more than $88,000. Even so, the ballooning loan balance is not of any concern to Robert, nor should it be. With loan forgiveness after 20 years of payments, unpaid interest is of little consequence to him.

As Robert goes on to earn well over $100,000 annually after his 10th year of repayment, New IBR effectively allows Robert to forgo making a single payment on the principal balance of his loan. After his 20th year of repayment, he has paid a total of $141,350 on his loans but still has an outstanding balance of $160,536–all of his original principal balance and $38,562 in accrued unpaid interest. After 20 years of payments, that outstanding balance is forgiven when Robert is earning a salary of $164,228 (AGI $156,017) and has one child. His wife is now earning $90,000 a year. Robert and his wife are by most definitions a high-income household. In today's dollars, their combined household income would be equivalent to $155,000.[83] Furthermore, Robert goes on to earn a significantly higher income after his loans are forgiven, and making further payments would not have been a financial strain.

By comparison, had Robert chosen the fixed-rate consolidation he would have paid $303,280 over 30 years. In fact, even if Robert had repaid his loans under the standard 10-year repayment plan, he would have paid more in total ($172,789) than under New IBR.

Recall that Robert chose to pay off $5,000 in federal loans from his undergraduate studies when he was working at a law firm before he attended law school. While that seems like a prudent financial decision, under New IBR, Robert would have been better off saving that money and making only the minimum monthly payment instead. That is because his loans from his undergraduate studies would have been forgiven when his debt from law school was forgiven, and even though he enters IBR with a higher loan balance, he *does not pay any more monthly or in total under New IBR than if he had paid the loans off prior to entering law school.*

Of course, the decision for Robert to choose New IBR was an easy one. Consolidation requires that he repay his loan fully in 30 years, while IBR forgives his loan after 20 years—and it offers him the lowest monthly payments in every year until he reaches his 17th year of repayment, at which point he is only three years away from having his loans forgiven. For those reasons, the law school that Robert attended is likely to advise all of its students to borrow to pay for school—even if they have savings or other personal assets to put toward tuition—and enroll in IBR to repay.

Appendix II: Year-By-Year Tables of Borrower Examples

All borrowers file separate federal income tax returns and claim any children that they have as dependents on their returns. The interest rate for all repayment plans is the rate the borrower would pay under the consolidation plan, which is the weighted average rate rounded to the nearest one-eighth of 1 percent.

Heather: Starting Balance: $31,352 at 6.875%

Repayment Year	1	2	3	4	5	6	7	8	9
Salary ($)	22,000	23,000	12,000	34,000	35,360	36,774	38,245	39,775	48,000
IBR Old ($)									
Monthly payment	38	44	-	157	167	177	187	198	285
Loan Balance	33,051	34,677	36,833	37,106	37,263	37,299	37,207	36,983	35,722
IBR New ($)									
Monthly payment	25	29	-	105	111	118	125	132	190
Loan balance	33,203	35,006	37,161	38,062	38,885	39,627	40,285	40,854	40,732
20-Year Consolidation ($)									
Monthly payment fixed	241	241	241	241	241	241	241	241	241
Monthly payment grad.	180	180	194	194	210	210	227	227	246

Repayment Year	10	11	12	13	14	15	16	17	18
Salary ($)	49,920	51,917	53,993	56,153	62,500	65,000	66,280	67,560	68,840
IBR Old ($)									
Monthly payment	300	316	332	350	362	362	362	362	362
Loan Balance	34,280	32,647	30,815	28,736	26,368	23,837	21,131	18,240	15,150
IBR New ($)									
Monthly payment	200	210	222	233	276	290	295	299	303
Loan balance	40,489	40,119	39,616	38,973	37,816	36,492	35,113	33,679	32,193
20-Year Consolidation ($)									
Monthly payment fixed	241	241	241	241	241	241	241	241	241
Monthly payment grad.	246	266	266	287	287	311	311	336	336

Repayment Year	19	20	21	22	23	Total Payments	Forgiven
Salary ($)	70,120	71,400	72,680	73,960	75,240		
IBR Old ($)							
Monthly payment	362	362	362	362	362	**70,210**	**-**
Loan Balance	11,848	8,318	4,546	514	-		
IBR New ($)							
Monthly payment	308	312	-	-	-	**45,393**	**29,020**
Loan balance	30,655	29,020	-	-	-		
20-Year Consolidation ($)							
Monthly payment fixed	241	241	-	-	-	**57,574**	**-**
Monthly payment grad.	363	363	-	-	-	**63,201**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Heather has no children.

Eric Undergraduate: Starting Balance: $20,924 at 6.875%

Repayment Year	1	2	3	4	5	6	7	8	9
Salary ($)	25,000	28,000	35,000	50,000	52,000	54,080	56,243	58,493	60,833
IBR Old ($)									
Monthly payment	72	100	174	242	242	242	242	242	242
Loan Balance	21,501	21,736	21,090	19,641	18,092	16,437	14,667	12,777	10,756
IBR New ($)									
Monthly payment	48	67	116	225	181	191	202	213	165
Loan balance	21,788	22,424	22,473	21,217	20,483	19,595	18,517	17,229	16,438
20-Year Consolidation ($)									
Monthly payment fixed	161	161	161	161	161	161	161	161	161
Monthly payment grad.	120	120	130	130	140	140	152	152	164

Repayment Year	10	11	12	13	14	15	16	17	18
Salary ($)	63,266	65,797	80,000	83,200	86,528	89,989	93,589	97,332	101,226
IBR Old ($)									
Monthly payment	242	242	242	242	242	-	-	-	-
Loan Balance	8,596	6,962	4,541	1,954	-	-	-	-	-
IBR New ($)									
Monthly payment	175	123	220	234	242	242	242	242	242
Loan balance	15,462	15,049	13,443	11,554	9,450	7,200	4,796	2,226	-
20-Year Consolidation ($)									
Monthly payment fixed	161	161	161	161	161	161	161	161	161
Monthly payment grad.	164	177	177	192	192	207	207	224	224

Repayment Year	19	20	Total Payments	Forgiven
Salary ($)	105,275	109,486		
IBR Old ($)				
Monthly payment	-	-	**34,410**	-
Loan Balance	-	-		
IBR New ($)				
Monthly payment	-	-	**39,750**	-
Loan balance	-	-		
20-Year Consolidation ($)				
Monthly payment fixed	161	161	**38,558**	-
Monthly payment grad.	243	243	**42,180**	-

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Eric has a child in each of years five, nine, and 11, included in calculation thereafter.

Eric Graduate: Starting Balance: $56,432 at 6.875%

Repayment Year	1	2	3	4	5	6	7	8	9
Salary ($)	33,000	34,320	35,693	53,750	55,900	58,136	60,461	77,550	80,652
IBR Old ($)									
Monthly payment	162	171	181	379	315	333	351	535	470
Loan Balance	58,370	60,193	61,895	61,226	61,321	61,209	60,881	58,346	56,587
IBR New ($)									
Monthly payment	108	114	121	253	210	222	234	356	313
Loan balance	59,017	61,526	63,954	64,801	66,157	67,376	68,451	68,054	68,174
25-Year Consolidation ($)									
Monthly payment fixed	394	394	394	394	394	394	394	394	394
Monthly payment grad.	323	323	338	338	354	354	370	370	387

Repayment Year	10	11	12	13	14	15	16	17	18
Salary ($)	83,878	87,233	112,200	116,688	121,356	126,210	131,258	136,508	141,969
IBR Old ($)									
Monthly payment	495	371	622	652	652	652	652	652	652
Loan Balance	54,525	53,821	50,054	45,676	40,997	35,996	30,652	24,940	18,836
IBR New ($)									
Monthly payment	330	247	415	437	460	484	510	536	564
Loan balance	68,093	69,004	67,906	66,542	64,901	62,969	60,733	58,179	55,293
25-Year Consolidation ($)									
Monthly payment fixed	394	394	394	394	394	394	394	394	394
Monthly payment grad.	387	405	405	424	424	443	443	464	464

Repayment Year	19	20	21	22	23	24	25	Total Payments	Forgiven
Salary ($)	147,648	153,553	159,696	166,083	172,727	179,636	186,821		
IBR Old ($)									
Monthly payment	652	652	652	-	-	-	-	**120,516**	**-**
Loan Balance	12,312	5,339	-	-	-	-	-		
IBR New ($)									
Monthly payment	593	623	-	-	-	-	-	**85,564**	**48,077**
Loan balance	51,981	48,077	-	-	-	-	-		
25-Year Consolidation ($)									
Monthly payment fixed	394	394	394	394	394	394	394	**118,308**	**-**
Monthly payment grad.	485	485	508	508	531	531	556	**128,570**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Eric has a child in each of years five, nine, and 11, included in calculation thereafter.

Robert Law School Grad: Starting Balance: $121,974 at 7.375%

Repayment Year	1	2	3	4	5	6	7	8	9	10	11
Salary ($)	65,000	65,000	67,000	67,000	100,000	80,000	83,200	86,528	89,989	93,589	140,000
IBR Old ($)											
Monthly payment	522	517	534	528	831	613	641	670	701	639	1,298
Loan Balance	124,708	127,505	130,096	132,754	131,775	133,416	134,719	135,672	136,259	137,584	130,999
IBR New ($)											
Monthly payment	348	344	356	352	554	409	427	447	467	426	866
Loan balance	126,795	131,658	136,384	141,155	143,501	147,593	151,461	155,094	158,484	162,366	160,975
30-Year Consolidation ($)											
Monthly pay. fixed	842	842	842	842	842	842	842	842	842	842	842
Monthly pay. grad.	750	750	768	768	788	788	807	807	828	828	848

Repayment Year	12	13	14	15	16	17	18	19	20	21	22
Salary ($)	120,000	124,800	129,792	134,984	140,383	145,998	151,838	157,912	164,228	170,797	177,629
IBR Old ($)											
Monthly payment	902	943	987	1,032	1,079	1,128	1,180	1,431	1,440	1,440	1,440
Loan Balance	129,175	126,852	124,009	120,623	116,571	111,629	105,707	96,336	86,162	75,238	63,508
IBR New ($)											
Monthly payment	601	629	658	688	719	752	786	954	996	-	-
Loan balance	162,757	164,207	165,310	166,051	166,415	166,385	165,944	163,495	160,536		
30-Year Consolidation ($)											
Monthly pay. fixed	842	842	842	842	842	842	842	842	842	842	842
Monthly pay. grad.	848	869	869	891	891	914	914	936	936	960	960

Repayment Year	23	24	25	26	27	28	29	30	Total Payments	Forgiven
Salary ($)	184,734	192,124	199,809	207,801	216,113	224,758	233,748	243,098		
IBR Old ($)										
Monthly payment	1,440	1,440	1,440	-	-	-	-	-	**297,766**	**22,867**
Loan Balance	50,913	37,389	22,867	-	-	-	-	-		
IBR New ($)										
Monthly payment	-	-	-	-	-	-	-	-	**141,350**	**160,536**
Loan balance	-	-	-	-	-	-	-	-		
30-Year Consolidation ($)										
Monthly pay. fixed	842	842	842	842	842	842	842	842	**303,280**	**-**
Monthly pay. grad.	984	984	1,008	1,008	1,034	1,034	1,060	1,060	**324,868**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Robert has one child in year 10, who is included in calculation thereafter.

Appendix III: Borrower Examples With Recommended IBR Changes

Note: Figures for the recommended IBR changes reflect all proposed changes except that borrower income does not reflect household income. All borrowers file separate federal income tax returns and claim any children that they have as dependents on their returns. The interest rate for all repayment plans is the rate the borrower would pay under the consolidation plan, which is the weighted average rate rounded to the nearest one-eighth of one percent.

Heather: Starting Balance: $31,352 at 6.875%

Repayment Year	1	3	5	10	15	20	23	Total Payments	Forgiven
Salary ($)	22,000	12,000	35,360	49,920	65,000	71,400	75,240		
IBR Old ($)									
Monthly payment	38	-	167	300	362	362	362	**70,210**	-
Loan Balance	33,051	36,833	37,263	34,280	23,837	8,318	-		
IBR New ($)									
Monthly payment	25	-	111	200	290	282	-	**45,393**	**29,020**
Loan balance	33,203	37,161	38,885	40,489	36,492	29,020			
IBR Recommended ($)									
Monthly payment	25	-	111	300	435	468	-	**64,218**	**6,047**
Loan balance	33,203	37,161	38,885	38,151	26,758	6,047	-		
20-Year Consolidation ($)									
Monthly payment fixed	241	241	241	241	241	241	-	**57,574**	-
Monthly payment graduated	180	194	210	246	311	363	-	**63,201**	-

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Heather has no children.

Eric Undergraduate: Starting Balance: $20,924 at 6.875%

Repayment Year	1	3	5	10	14	18	20	Total Payments	Forgiven
Salary ($)	25,000	35,000	52,000	63,226	86,528	101,226	109,486		
IBR Old ($)									
Monthly payment	72	174	242	242	242	242	-	**34,410**	-
Loan Balance	21,501	21,090	18,092	8,596	-	-	-		
IBR New ($)									
Monthly payment	48	116	181	175	242	242	-	**39,750**	-
Loan balance	21,778	22,473	20,483	15,462	10,690	-	-		
IBR Recommended ($)									
Monthly payment	48	116	181	175	249	-	-	**37,872**	-
Loan balance	21,788	22,473	19,177	13,641	6,849	-	-		
20-Year Consolidation ($)									
Monthly payment fixed	161	161	161	161	161	161	161	**38,558**	-
Monthly payment graduated	120	130	140	164	192	224	243	**42,180**	-

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Eric has a child in each of years five, nine, and 11, included in calculation thereafter.

Eric Graduate: Starting Balance: $56,432 at 6.875%

Repepayment Year	1	4	8	12	20	22	25	Total Payments	Forgiven
Salary ($)	33,000	53,750	77,550	112,200	153,553	166,083	186,821		
IBR Old ($)									
Monthly payment	162	379	535	622	652	652	-	**120,516**	**-**
Loan Balance	58,370	61,226	58,346	50,054	5,339	-	-		
IBR New ($)									
Monthly payment	108	253	356	415	623	-	-	**85,564**	**48,077**
Loan balance	59,017	64,801	68,054	67,906	48,077	-	-		
IBR Recommended ($)									
Monthly payment	108	121	535	622	935	-	-	**121,066**	**-**
Loan balance	59,017	63,284	60,404	53,908	-	-	-		
20-Year Consolidation ($)									
Monthly payment fixed	394	394	394	394	394	394	394	**118,308**	**-**
Monthly payment graduated	323	338	370	405	485	508	556	**128,570**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Eric has a child in each of years five, nine, and 11, included in calculation thereafter.

Robert Law School Grad: Starting Balance: $121,974 at 7.375%

Repayment Year	1	3	5	10	15	20	25	30	Total Payments	Forgiven
Salary ($)	65,000	67,000	100,000	93,589	134,984	164,228	199,809	243,098		
IBR Old ($)										
Monthly payment	522	534	831	639	1,032	1,440	1,440	-	**297,766**	**22,867**
Loan Balance	124,708	130,396	131,775	137,584	120,623	86,162	22,867	-		
IBR New ($)										
Monthly payment	348	356	554	426	688	996	-	-	**141,350**	**160,536**
Loan balance	126,795	136,384	143,501	162,366	166,051	160,536	-	-		
IBR Recommended ($)										
Monthly payment	522	534	831	639	1,032	1,494	1,856	-	**314,349**	**4,204**
Loan balance	124,708	130,096	131,775	137,584	120,623	85,510	4,204	-		
20-Year Consolidation ($)										
Monthly payment fixed	842	842	842	842	842	842	842	842	**303,280**	**-**
Monthly payment graduated	750	768	788	828	891	936	1,008	1,060	**324,868**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Robert has one child in year 10 who is included in calculation thereafter.

Appendix IV: Supplemental Borrower Examples

All borrowers file separate federal income tax returns and claim any children that they have as dependents on their returns. All examples include loan balances composed of Unsubsidized Stafford and Graduate PLUS loans, unless a Subsidized Stafford loan balance is indicated in the note at the bottom of the table. The interest rate for all repayment plans is the rate the borrower would pay under the consolidation plan, which is the weighted average rate rounded to the nearest one-eighth of 1 percent.

Undergraduate A: Starting Balance: $17,054 at 6.875%

Repayment Year	1	3	5	10	15	20	Total Payments	Forgiven
Salary ($)	28,000	35,000	39,140	57,680	74,160	83,111		
IBR Old ($)								
Monthly payment	106	96	127	197	197	-	**31,000**	**-**
Loan Balance	17,023	16,972	16,303	11,329	2,242	-		
IBR New ($)								
Monthly payment	70	64	85	134	197	197	**32,985**	**3,555**
Loan balance	17,161	17,381	17,738	16,862	12,271	3,555		
IBR Recommended ($)								
Monthly payment	70	64	85	134	217	244	**35,223**	**967**
Loan balance	17,161	17,381	17,738	16,878	11,889	967		
Consolidation ($)								
Monthly payment fixed	152	152	152	152	152	-	**27,377**	**-**
Monthly payment grad.	105	118	134	175	289	-	**30,265**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has a child in each of years three and eight, included in calculation thereafter. Borrower has $11,500 in Subsidized Stafford loans.

Undergraduate B: Starting Balance: $27,444 at 6.875%

Repayment Year	1	3	5	10	15	20	25	Total Payments	Forgiven
Salary ($)	15,000	30,000	32,448	48,000	76,000	50,000	60,833		
IBR Old ($)									
Monthly payment	-	117	134	185	317	107	168	**50,350**	**22,745**
Loan Balance	29,331	31,695	32,359	35,240	30,742	23,241	22,745		
IBR New ($)									
Monthly payment	-	78	89	123	453	71	-	**34,041**	**33,089**
Loan balance	29,331	32,165	33,865	38,931	37,767	33,089	-		
IBR Recommended ($)									
Monthly payment	-	78	89	123	453	71	-	**45,385**	**19,203**
Loan balance	29,331	32,165	33,865	38,931	36,786	19,203	-		
Consolidation ($)									
Monthly payment fixed	211	211	211	211	211	211	-	**50,573**	**-**
Monthly payment grad.	158	173	186	217	274	355	-	**56,105**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has a child in year seven who is included in calculation thereafter.

Undergraduate C: Starting Balance: $24,764 at 6.875%

Repayment Year	1	3	5	10	15	20	Total Payments	Forgiven
Salary ($)	40,000	41,818	43,082	46,411	49,998	53,862		
IBR Old ($)								
Monthly payment	241	250	253	260	-	-	**38,145**	-
Loan Balance	23,580	20,995	17,709	6,970	-	-		
IBR New ($)								
Monthly payment	160	167	169	174	177	180	**41,579**	**10,655**
Loan balance	24,542	23,954	23,180	20,506	16,488	10,655		
IBR Recommended ($)								
Monthly payment	241	250	253	174	177	-	**38,904**	-
Loan balance	23,580	20,995	17,709	8,012	-	-		
Consolidation ($)								
Monthly payment fixed	190	190	190	190	190	190	**45,634**	-
Monthly payment grad.	143	156	168	196	247	321	**50,626**	-

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has no children.

Undergraduate D: Starting Balance: $20,584 at 6.875%

Repayment Year	1	3	5	10	15	20	Total Payments	Forgiven
Salary ($)	36,000	45,000	48,204	67,492	88,000	107,065		
IBR Old ($)								
Monthly payment	196	238	238	238	-	-	**30,101**	-
Loan Balance	19,652	16,935	13,443	2,384	-	-		
IBR New ($)								
Monthly payment	130	191	207	207	-	-	**33,741**	-
Loan balance	20,435	19,273	16,997	9,003	-	-		
IBR Recommended ($)								
Monthly payment	130	286	311	207	-	-	**29,816**	-
Loan balance	20,435	18,098	13,146	-	-	-		
Consolidation ($)								
Monthly payment fixed	158	158	158	158	158	158	**37,931**	-
Monthly payment grad.	119	130	140	163	205	267	**42,081**	-

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has a child in each of years six and 10, included in calculation thereafter.

Undergraduate E: Starting Balance: $11,976 at 6.875%

Repayment Year	1	3	5	10	15	20	25	Total Payments	Forgiven
Salary ($)	26,000	27,849	36,250	49,141	-	41,082	51,196		
IBR Old ($)									
Monthly payment	83	93	94	11	-	-	-	**10,270**	**22,766**
Loan Balance	11,940	11,838	12,084	12,364	14,533	18,650	22,766		
IBR New ($)									
Monthly payment	55	62	63	7	-	-	-	**6,847**	**21,296**
Loan balance	12,009	12,054	12,773	14,361	17,179	21,296	-		
IBR Recommended ($)									
Monthly payment	55	62	63	7	-	-	-	**6,847**	**21,296**
Loan balance	12,009	12,054	12,773	14,361	17,179	21,296	-		
Consolidation ($)									
Monthly payment fixed	107	107	107	107	107	-	-	**19,226**	**-**
Monthly payment grad.	74	83	94	123	203	-	-	**21,254**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has a child in each of years four, seven, and 10, included in calculation thereafter. Borrower has $9,500 in Subsidized Stafford loans.

Graduate A: Starting Balance: $78,393 at 7.000%

Repayment Year	1	3	5	10	15	20	25	30	Total Payments	Forgiven
Salary ($)	45,000	48,431	65,000	110,000	175,000	197,996	224,015	253,452		
IBR Old ($)										
Monthly payment	297	325	500	720	910	910	-	-	**176,460**	**-**
Loan Balance	80,122	83,063	84,044	81,513	59,545	20,702	-	-		
IBR New ($)										
Monthly payment	198	217	333	480	910	910	-	-	**124,193**	**65,407**
Loan balance	81,188	86,434	90,746	98,025	91,419	65,407	-	-		
IBR Recommended ($)										
Monthly payment	297	325	500	720	1,570	-	-	-	**164,585**	**-**
Loan balance	80,122	83,063	84,044	81,513	51,631	-	-	-		
Consolidation ($)										
Monthly payment fixed	522	522	522	522	522	522	522	522	**187,758**	**-**
Monthly payment graduated	459	474	483	514	558	591	642	741	**203,339**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has a child in each of years six and 10, included in calculation thereafter. Borrower has $8,000 in Subsidized Stafford loans from undergraduate studies.

Graduate B: Starting Balance: $61,182 at 6.875%

Repayment Year	1	3	5	10	15	20	25	30	Total Payments	Forgiven
Salary ($)	45,000	47,278	49,672	15,000	65,000	78,000	94,899	115,459		
IBR Old ($)										
Monthly payment	297	312	245	-	329	422	551	-	**92,830**	**73,074**
Loan Balance	61,658	62,412	64,045	72,558	82,666	81,856	73,074	-		
IBR New ($)										
Monthly payment	198	208	164	-	219	281	-	-	**42,010**	**101,907**
Loan balance	62,535	65,108	69,001	81,867	95,436	101,907	-	-		
IBR Recommended ($)										
Monthly payment	297	312	164	-	219	281	551	-	**73,094**	**92,809**
Loan balance	61,658	62,412	65,027	77,712	91,461	97,932	92,809	-		
Consolidation ($)										
Monthly payment fixed	402	402	402	402	402	402	402	402	**144,692**	**-**
Monthly payment graduated	354	365	372	396	430	454	494	569	**156,470**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has one child in year five who is included in calculation thereafter. Loan balance includes $16,000 in Subsidized Stafford loans from undergraduate studies.

Graduate C: Starting Balance: $41,570 at 6.875%

Repayment Year	1	3	5	10	15	20	25	30	Total Payments	Forgiven
Salary ($)	28,000	39,000	41,375	48,000	65,000	80,000	97,332	118,420		
IBR Old ($)										
Monthly payment	106	219	152	185	329	444	480	-	**84,582**	**28,633**
Loan Balance	42,855	44,303	46,442	50,467	51,383	42,157	25,869	-		
IBR New ($)										
Monthly payment	70	146	101	123	219	296	-	-	**37,280**	**60,465**
Loan balance	43,196	45,700	49,031	56,478	61,851	60,465	-	-		
IBR Recommended ($)										
Monthly payment	70	146	101	123	219	296	578	-	**68,615**	**46,916**
Loan balance	43,196	45,700	49,031	56,478	61,851	60,465	46,916	-		
Consolidation ($)										
Monthly payment fixed	291	291	291	291	291	291	291	-	**87,150**	**-**
Monthly payment graduated	241	252	263	288	328	363	446	-	**95,288**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has one child in year four who is included in calculation thereafter. Loan balance includes $8,000 in Subsidized Stafford loans from undergraduate studies.

Graduate D: Starting Balance: $165,882 at 7.375%

Repayment Year	1	3	5	10	15	20	25	30	Total Payments	Forgiven
Salary ($)	90,000	93,600	101,238	135,000	164,248	243,360	249,505	255,805		
IBR Old ($)										
Monthly payment	747	774	844	1,248	1,442	1,958	1,958	-	**409,445**	**23,892**
Loan Balance	169,154	175,430	180,061	184,231	164,920	112,129	23,892	-		
IBR New ($)										
Monthly payment	498	516	563	832	961	1,603	-	-	**202,299**	**208,259**
Loan balance	172,141	184,481	195,724	218,894	226,410	208,259	-	-		
IBR Recommended ($)										
Monthly payment	747	774	844	1,248	1,442	2,405	2,309	-	**423,507**	**-**
Loan balance	169,154	175,430	180,061	184,231	164,920	100,022	-	-		
Consolidation ($)										
Monthly payment fixed	1,146	1,146	1,146	1,146	1,146	1,146	1,146	1,146	**412,454**	**-**
Monthly payment graduated	1,008	1,042	1,063	1,133	1,232	1,304	1,420	1,647	**448,656**	**-**

Source: New America Foundation. Note: Loan balance reflects principal and accrued unpaid interest at the end of the repayment year indicated. Borrower has a child in each of years eight and 12, included in calculation thereafter.

Appendix V: IBR Calculator Explanation

The New America Foundation calculator was built using a Microsoft Excel spreadsheet and relies primarily on nested "IF" functions. These functions allow a user to enter in a minimal amount of information, with the rest of the process automated to display results.

Inputs Users Must Enter

Loan Balance, Type, and Interest Rate

The user enters how much money a borrower takes out for each federal student loan type. The user must also enter the interest rate charged on each type of loan. Once the information is entered, the calculator automatically determines how much interest accrued for each type of loan while the borrower was enrolled in school, and therefore determines the new loan balance upon leaving school. The interest does not compound over that time. Therefore, the calculator will show that a student who takes out a $1,000 loan in his first year of school will have at graduation a $1,000 loan plus four years of interest. The calculator then translates loan balances and interest rates at graduation into a weighted average interest rate, rounding up to the nearest eighth of a percentage point (which mimics the consolidation repayment option). At this point, the user can now see the total loan balance and consolidated interest rate. The calculator uses the consolidation interest rate for all calculations to make loan payments between repayment plans more comparable.

Old IBR and New IBR Selection

The user must also select the IBR program (Old or New). The calculator will then reflect the repayment criteria that correspond to the selected repayment plan (i.e., payments based on 15 percent or 10 percent of income, and loan forgiveness after 25 years or 20 years of repayment).

Total Income

The user must enter in the total annual income that a borrower will earn in each year of repayment, and in which years the borrower will add an additional member to her household (i.e., spouse, children).

Automated Inputs That Users Do Not Enter

Adjusted Gross Income Calculation

The total annual income that a user enters into the calculator for each year is reduced to derive the borrower's AGI. Income levels entered into the calculator that are less than $68,000 equate to an AGI of 90 percent of total income. Income between $68,001 and $100,000 equates to an AGI of 85 percent of total income. Income between $100,001 and $150,000 equates to an AGI of 95 percent of income. Income between $150,001 and $200,000 equates to an AGI of 98 percent of income. Income of $200,000 and above is not reduced. The calculator automatically increases those income brackets by 2.5 percent each successive year in the calculator. For example, the $68,000 income threshold at which point a borrower's AGI reflects 90 percent of total income increases by 2.5 percent per year so that in the second year it is $69,700, and so on.

Poverty Exemption Calculation

The IBR calculator automatically adjusts the poverty exemption under IBR based on household size. In the first repayment year, the poverty exemption is set to the 2012 federal poverty guidelines (multiplied by 150 percent). Each successive year, the calculator increases the exemption for inflation by 2.51 percent for the borrower and by 2.58 percent for each additional family member. That figure is equal to the 20-year average of annual increases in the federal poverty guidelines from 1992 to 2012.

Payment Calculations

The calculator determines a borrower's annual IBR payment by multiplying the borrower's AGI (calculated by the formula discussed above) by the IBR rate (10 or 15 percent depending on which plan the user selected). The calculator shows an IBR monthly payment as the annual payment divided by 12. However, if the IBR monthly payment calculated is greater than what the borrower would pay under the standard, 10-year monthly repayment rate based on his original loan balance, the calculator sets the IBR payment equivalent to the standard repayment (i.e., the payment cap).

Interest accrues annually for all calculations. If the borrower's loan balance outstanding is greater than his original loan balance, then the calculator determines annual interest by multiplying the original loan balance by the interest rate the user enters. Interest is not compounded. If, on the other hand, the borrower's loan balance outstanding is less than the original loan balance, then annual interest equals the previous year's outstanding loan balance multiplied by the interest rate. Accrued, unpaid interest is added to a borrower's principal balance when a borrower's income is high enough that the IBR payment is capped at the 10-year standard repayment rate. The calculator treats the borrower's loan balance at that point as a new loan and interest accrues on that new balance. If a borrower's annual payments exceed accrued interest, the excess amount is first applied to any accrued unpaid interest from prior years, then to the principal balance of the loan.

The calculator displays the borrower's cumulative unpaid interest (i.e. negatively amortized interest) and cumulative principal payments. Loan forgiveness amounts are calculated as the borrower's outstanding principal balance and any accrued but unpaid interest at the time the borrower completes his final year of repayment (25 years under Old IBR and 20 years under New IBR).

Notes

1 President Obama: "And let's tell another one million students that when they graduate, they will be required to pay only 10 percent of their income on student loans, and all of their debt will be forgiven after 20 years—and forgiven after 10 years if they choose a career in public service, because in the United States of America, no one should go broke because they chose to go to college." Barack Obama, "Remarks by the President in State of the Union Address" (speech, Washington, DC, January 27, 2010), White House, http://www.whitehouse.gov/the-press-office/remarks-president-state-union-address.

2 *Health Care and Education Reconciliation Act of 2010*, Public Law 111-152 §2213, 111th Congress (March 30, 2010), U.S. Government Printing Office, http://www.gpo.gov/fdsys/pkg/PLAW-111publ152/html/PLAW-111publ152.htm.

3 "We Can't Wait: Obama Administration to Lower Student Loan Payments for Millions of Borrowers," U.S. Department of Education press release, October 25, 2011, http://www.ed.gov/news/press-releases/we-cant-wait-obama-administration-lower-student-loan-payments-millions-borrowers. According to the proposed regulations, Pay As You Earn (PAYE) will be available to borrowers who were new borrowers as of *fiscal year* 2008, which started on October 1, 2007. See: 34 *Fed. Reg.* 42086, 42089-90 (17 July 2012). Available: http://www.gpo.gov/fdsys/pkg/FR-2012-07-17/pdf/2012-15888.pdf.

4 The methodology of the calculator is explained in Appendix V.

5 Lower-income borrowers are those who have incomes of $25,000 or less.

6 Middle-income borrowers are those whose initial incomes are temporarily low (between $25,000 and $33,000) but who quickly go on to earn incomes from $38,000 to $62,999 and ultimately high incomes of $63,000 and above for the majority of the time that they repay their loans.

7 The exception to this tendency is a borrower who is eligible for and enrolls in IBR and whose income increases rapidly after enrolling such that he hits the maximum payment cap early in his repayment term and his income remains at a high level. Such a borrower would incur the incremental costs associated with borrowing above $60,000.

8 U.S. Office of Federal Student Aid, *If your student loan debt is high but your income is modest, you may qualify for the Income-Based Repayment Plan (IBR)* (accessed 25 September 2012), http://studentaid.ed.gov/repay-loans/understand/plans/income-based.

9 Under graduated repayment, initial payments cannot be lower than what a borrower would need to pay to fully cover the interest that accrues on his loans each month, and the highest payments may not be higher than three times the lowest payment.

10 Borrowers may also pay through the Income Contingent Repayment (ICR) plan, but that plan is not discussed in this paper. Generally, ICR provides smaller benefits than either Old or New IBR, although it works in a similar fashion. Payments are calculated at 20 percent of a borrower's adjusted gross income after a cost-of-living exemption that is equal to the federal poverty guidelines. Loan forgiveness is provided after 25 years of payments.

11 *College Cost Reduction and Access Act*, Public Law 110-84 §203(c)(1), 110th Congress (27 September 2007), U.S. Government Printing Office, http://www.gpo.gov/fdsys/pkg/PLAW-110publ84/pdf/PLAW-110publ84.pdf. The law set the effective date on and after which borrowers could enroll at July 1, 2009.

12 34 *CFR* 685.221 (2009).

13 The Congressional Budget Office estimated in 2007 that adding IBR and related provisions to the federal loan program would cost $1.9 billion through 2017, under the assumption that few borrowers would enroll. Separately, the agency estimated that the public service loan forgiveness benefit would reduce spending by $110 million over the same time period because borrowers would be required to switch to the lower-cost Direct Loan program from the more expensive, private lender-based Federal Family Education Loan program to qualify. "Cost Estimate: H.R. 2669—Conference Agreement, Proposed Changes Affecting Mandatory Spending Relative to the CBO March 2007 Baseline," Congressional Budget Office, 5 September 2007. From an unpublished preliminary estimate, available from authors upon request.

14 34 *CFR* 685.219 (2009). As of July 1, 2010, all newly issued federal student loans are made through the Direct Loan program.

15 P.L. 111-152 §2213.

16 The Congressional Budget Office estimated that the New IBR would add $393 million to the cost of the federal student loan program each year it is fully in effect. From an unpublished preliminary CBO estimate, available from authors upon request.

17 P.L. 111-152 §2213. Borrowers who qualify for both New IBR and Old IBR will choose New IBR, because it yields a lower monthly payment and 20 years in repayment instead of 25 years. A borrower who pays off all of his federal loans before July 1, 2014, and then borrows a new loan after that date is considered a "new borrower" and is eligible. However, a borrower with a newly issued consolidation loan after that date is not a "new borrower," since he would have had loans prior to July 1, 2014. Only by paying off previous federal loans in full can someone who had loans prior to July 1, 2014, become a "new borrower."

18 For the proposed rules, see: 77 *Fed Reg.* 42086, 42089-90 (17 July 2012). Available: http://www.gpo.gov/fdsys/pkg/FR-2012-07-17/pdf/2012-15888.pdf. For the cost estimate, see page 42121 of the same document. The White House Office of Management and Budget estimated that the change would cost $2.1 billion through 2021, or an average of $218 million per year.

19 Consolidation loans qualify as a new loan, thereby making most new borrowers as of 2008 eligible for PAYE. See: 77 *Fed Reg.* 42090 (17 July 2012). Available: http://www.gpo.gov/fdsys/pkg/FR-2012-07-17/pdf/2012-15888.pdf.

20 To enact PAYE, the Obama administration used regulatory authority to create another Income Contingent Repayment plan that mimics New IBR enacted in 2010. Federal law allows the Secretary of Education to develop an income-contingent plan within certain guidelines for the Direct Loan program. Those guidelines, however, required that the Obama administration include a few small differences between PAYE and New IBR that lead to minute differences in what borrowers will actually pay when they enroll in PAYE compared to borrowers eligible for New IBR in 2014. These differences are beyond the scope of this paper, and we treat New IBR as equivalent to PAYE. See: Congressional Research Service, by Jody Feder and David P. Smole, *Statutory Authority for the Obama Administration's Special Direct Consolidation Loan and Pay-As-You-Earn Student Loan Proposals*, CRS Report 7-5700 (14 November 2011): 8.

21 See: Robert Shireman, Lauren J. Asher, Ajita Talwalker, Shu-Ahn Li, Edie Irons, and Rowan Cota, "Addressing Student Loan Repayment Burdens," The Project on Student Debt (February 2006): http://projectonstudentdebt.org/files/pub/WHITE_PAPER_FINAL_PDF.pdf. Generally, the Income Contingent Repayment plan provides smaller benefits (i.e., higher payments) than both Old and New IBR, although it works in a similar fashion. Payments are calculated at 20 percent of a borrower's adjusted gross income after a cost-of-living exemption that is equal to the federal poverty guidelines. Loan forgiveness is provided after 25 years of payments.

22 Office of the Vice President of the United States, *Annual Report of the White House Task Force on the Middle Class* (2010): 38. Available: http://www.whitehouse.gov/sites/default/files/microsites/100226-annual-report-middle-class.pdf.

23 Barack Obama, "Remarks by the President in State of the Union Address" (speech, Washington, DC, January 27, 2010), White House, http://www.whitehouse.gov/the-press-office/remarks-president-state-union-address. See also: U.S. Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2011* (2010): 66, 166. Available: http://www.gpo.gov/fdsys/pkg/BUDGET-2011-BUD/pdf/BUDGET-2011-BUD.pdf.

24 Molly Corbett Broad to Joseph Biden, 24 February 2010. Lauren Asher to Joseph Biden, 22 February 2010. Linda D Hallman to Joseph Biden, 24 February 2010. Gregory Cendana to Joseph Biden, 22 February 2010. Rich Williams to Joseph Biden, 23 February 2010. David Halperin, 23 February 2010. Michael L. Lomax to Joseph Biden, 24 February 2010. All letters available at: http://www.whitehouse.gov/sites/default/files/microsites/100226-capping-student-loan-payments.pdf.

25 P.L. 111-152 §2213.

26 "FACT SHEET: 'Help Americans Manage Student Loan Debt,' " White House press release, October 25, 2011, http://

www.whitehouse.gov/the-press-office/2011/10/25/fact-sheet-help-americans-manage-student-loan-debt. Two federal loan forgiveness programs already exist for teachers in high-need schools, and provide larger benefits than Old and New IBR. The programs existed prior to IBR's inception in 2007. Therefore, the argument that Old and New IBR are necessary to provide debt relief to elementary and secondary school teachers is true only for teachers who do not teach in high-need schools. More information on the loan forgiveness program is available on the U.S. Department of Education website. Available: http://studentaid.ed.gov/repay-loans/forgiveness-cancellation/charts/teacher

27 The U.S. Department of Education included an example in proposed regulations for New IBR that failed to index the IBR poverty exemption to inflation. 77 Fed Reg. 42118 (17 July 2012). Available: http://www.gpo.gov/fdsys/pkg/FR-2012-07-17/pdf/2012-15888.pdf. For further explanation, see: Alex Holt and Jason Delisle, "Department of Ed Gets It Wrong on New Pay As You Earn Calculations," *Ed Money Watch*, 19 July 2012, http://edmoney.newamerica.net/blogposts/2012/department_of_ed_gets_it_wrong_on_new_pay_as_you_earn_calculations-69768.

28 P.L. 111-152 §2213.

29 34 *CFR* 685.221(a)(4)(i) (2009).

30 Borrowers who fully repay federal student loans issued prior to those dates, but who take out new loans after the applicable dates qualify as "new borrowers" for purposes of determining eligibility under New IBR.

31 U.S. Department of Health and Human Services, *Frequently Asked Questions Related to the Poverty Guidelines and Poverty* (February 8, 2012). Available: http://aspe.hhs.gov/poverty/faq.shtml#differences.

32 "FACT SHEET: 'Help Americans Manage Student Loan Debt,' " White House press release, October 25, 2011, http://www.whitehouse.gov/the-press-office/2011/10/25/fact-sheet-help-americans-manage-student-loan-debt.

33 34 *CFR* 685.221(a)(1) (2009). "*Adjusted gross income (AGI)* means the borrower's adjusted gross income as reported to the Internal Revenue Service." A borrower's adjusted gross income can be quite different than his salary, wages, and other earned income. In fact, over 30 lines of the income tax form 1040 either add to or subtract from a taxpayer's AGI, and those adjustments are made after a taxpayer pays for pre-tax benefits offered by an employer, such as pension and retirement savings contributions, health insurance premiums, dependent care, and health care flexible spending accounts, etc. Moreover, many student loan borrowers using IBR will qualify for the $2,500 above-the-line deduction for student loan interest, which reduces their total income and is reflected in AGI. In fact, student loan borrowers earning middle and high incomes are likely to have an AGI about 10 percent to 15 percent below their total incomes based on a review of available data. For a discussion of this issue, see: David K. Randall, "Federal Program Overcharging Some Repaying Student Loans," *Forbes*, 22 March 2010, http://www.forbes.com/2010/03/22/income-based-repayment-overpay-personal-finance-student-loan-income.html. See also: "Check Your IBR Payment, It May Be Too High," *IBR Info*, http://www.ibrinfo.org/update_4210.vp.html.

34 The calculation is $30,000 - $3,000 - $16,755 X 10% divided by 12 months, versus the White House example of $30,000 - $16,755 X 10% divided by 12 months.

35 It is also important to note that a borrower using IBR has a much larger incentive to maximize pre-tax benefits through his employer than a similarly situated earner not repaying through IBR. A borrower in the 25 percent tax bracket normally receives a 25 percent increase in the value of his earnings if he makes pre-tax contributions to employer-provided benefits. Therefore, $1,000 in earnings equates to $750 after an earner pays federal income taxes, but it is worth $1,000 if he puts those earnings toward a pre-tax benefit. A borrower in the same tax bracket using IBR would receive a 35 percent benefit, or the 25 percent tax rate plus an additional 10 percentage points. Put another way, a borrower using IBR receives equivalent tax benefits on pre-tax contributions, as would a taxpayer in the 35 percent tax bracket, the top federal tax bracket that is levied on incomes above $388,350.

36 Those annual deductions are as follows: He qualifies for and claims the full $2,500 student loan interest deduction; he pays $1,300 in health insurance premiums; contributes $700 to a Health Care Flexible Spending Account; and makes a pre-tax contribution of $5,850 to a 401(k).

37 34 *CFR* 685.221(a)(1) (2009). "For a married borrower filing jointly, AGI includes both the borrower's and spouse's income. For a married borrower filing separately, AGI includes only the borrower's income."

38 Filing income taxes separately to reduce loan payments and increase the likelihood of loan forgiveness makes financial sense even in a two-earner household where the incomes are similar. For example, a financial planner or personal accountant should advise a married couple with one child, where each spouse earns $45,000 per year, to file their federal income tax returns separately if one earner has $31,352 in federal student loans and the other has none. Under New IBR, the borrower's payment would then be $148, compared to $363 under the standard 10-year repayment plan if the couple filed a joint return. Assuming the borrower earns an annual salary raise of 3.0 percent, opting to file a separate return would mean he has $24,073 in debt forgiven after 20 years of payments.

39 34 *CFR* 685.221(d)(1)(i)-(ii) (2009). "*Changes in the payment amount*. (1) If a borrower no longer has a partial financial hardship, the borrower may continue to make payments under the income-based repayment plan, but the Secretary recalculates the borrower's monthly payment. The Secretary also recalculates the monthly payment for a borrower who chooses to stop making income-based payments. In either case, as result of the recalculation—The maximum monthly amount that the Secretary requires the borrower to repay is the amount the borrower would have paid under the standard repayment plan based on the amount of the borrower's eligible loans that were outstanding at the time the borrower began repayment on the loans under the income-based repayment plan; and The borrower's repayment period based on the recalculated payment amount may exceed 10 years."

40 It is likely that policymakers included this provision to make the program more generous or to encourage enrollment among more borrowers who are eligible but might earn higher incomes later in their repayment terms. Another possible explanation is that, because borrowers can leave IBR for another repayment plan at any point, they would have an incentive to leave IBR if their incomes reached a level such that their payments under IBR were actually higher than under the standard 10-year repayment plan. In response, drafters may have included the cap so that borrowers do not need to leave IBR to pay at the 10-year rate once their incomes rise. Moreover, borrowers who leave IBR but continue to make payments as high as those under the standard 10-year repayment plan (based on the calculation on their original loan balance) may count those payments toward the minimum needed to qualify for loan forgiveness. Lastly, the provision also prevents a borrower from having to make payments that are higher than those on the 10-year standard repayment plan if he no longer qualifies for IBR and his loan balance increased while in IBR. However, that situation should occur extremely rarely, if ever, because a borrower can almost always opt to repay through consolidation and make payments that are less than those on a standard 10-year repayment plan.

41 34 *CFR* 685.221(d)(2)(ii) (2009).

42 34 *CFR* 685.221(f) (2009).

43 P.L. 111-152 §2213.

44 34 *CFR* 685.221(f)(1)(iii) (2009). "*Loan forgiveness*. (1) To qualify for loan forgiveness after 25 years, a borrower must have participated in the income-based repayment plan and satisfied at least one of the following conditions during that period: ... Made monthly payments under any repayment plan, that were not less than the amount required under the Direct Loan standard repayment plan described in §685.208(b)."

45 34 *CFR* 685.208(j) (1999).

46 34 *CFR* 685.221(b)(5) (2009).

47 Ibid. "If the borrower's monthly payment amount is not sufficient to pay any of the principal due, the payment of that principal is postponed until the borrower chooses to leave the income-based repayment plan or no longer has a partial financial hardship."

48 The exception to this tendency is a borrower who is eligible for and enrolls in IBR and whose income increases rapidly after enrolling such that he hits the maximum payment cap early in his repayment term, and his income remains at a high level. In such a case, the borrower could end up paying less and for a shorter period of time because New IBR would require that he make higher payments than he would otherwise need to make.

49 The main benefit of Subsidized Stafford loans compared with Unsubsidized Stafford and GRAD Plus loans is that they do not accrue interest while the borrower is in a qualified deferment period. The other types of loans accrue interest during deferment periods.

50 34 *CFR* 685.221(b)(3) (2009). "If the borrower's monthly payment amount is not sufficient to pay the accrued interest on the borrower's Direct Subsidized loan or the subsidized portion of a Direct Consolidation Loan, the Secretary does not charge the borrower the remaining accrued interest for a period not to exceed three consecutive years from the established repayment period start date on that loan under the income-based repayment plan. On a Direct Consolidation Loan that repays loans on which the Secretary has not charged the borrower accrued interest, the three-year period includes the period for which the Secretary did not charge the borrower accrued interest on the underlying loans. This three-year period does not include any period during which the borrower receives an economic hardship deferment."

51 Annual Subsidized Stafford loan limits are lower than those for Unsubsidized Stafford loans by $2,000 for dependent undergraduates and by $6,000 for independent undergraduates in a borrower's first two years of school and by $7,000 for later years. For both types of borrowers the limits are the following: $3,500 for first-year students; $4,500 for second-year students; and $5,500 for subsequent years, with an aggregate limit of $23,000. The aggregate Unsubsidized Stafford loan limits for dependent undergraduates and dependent graduates are $31,000 and $57,500 respectively. Borrowers may always borrow the maximum in Unsubsidized Stafford loans, less any amount in Subsidized Stafford loans they borrow. Therefore, many borrowers who qualify for Subsidized Stafford loans end up with a mix of the two loan types with varying balances depending on their eligibility for Subsidized Stafford loans and the amount they borrow. Prior to July 1, 2012, eligible graduate and professional students could borrow Subsidized Stafford loans up to $8,500 per year with an aggregate limit of $65,500, which includes any Subsidized Stafford loans from undergraduate studies.

52 Borrowers with loans in the defunct Federal Family Education Loan (FFEL) Program may change repayment plans not more than once per year. Congress ended the FFEL program in 2010 and no new loans have been made through the program since July 1, 2010. Borrowers may leave IBR due to administrative complications. For example, if they fail to file updated federal income tax or earnings information, or a student loan servicer or the Department of Education makes a processing error. In these instances, the borrower is treated as if he left IBR voluntarily and may re-enroll at any point provided he qualifies for reduced payments.

53 34 *CFR* 685.221(d)(2) (2009).

54 26 USC §61(a). "Except as otherwise provided in this subtitle, gross income means all income from whatever source derived." See also: Public service loans are forgiven due to an allowed exclusion of student loans if the borrower "worked for a certain period of time in certain professions for any of a broad class of employers," from 26 USC §108(f). For a detailed explanation of PSLF, see: Eric Solomon to Sander Levin, September 19, 2008. Available: http://www.ibrinfo.org/files/Treasury_response_levin.pdf.

55 Middle-income here is defined as approximately the income range in the middle-income quintile in 2010 according to the U.S. Census Bureau. See: United States Census Bureau, *Table H-1: Income Limits for Each Fifth and Top 5 Percent* (accessed 25 September 2012). Available: http://www.census.gov/hhes/www/income/data/historical/household/2011/H01AR_2011.xls.

56 Because IBR payments are based on a percentage of a borrower's income, reducing that rate from 15 percent to 10 percent under New IBR mathematically will create a larger nominal difference as a borrower's income increases. For example, a borrower with an AGI of $23,000 sees an $18 reduction in his monthly payment compared with Old IBR, while a borrower with an AGI of $60,000 sees a reduction of $181, provided his loan balance is large enough that his payments are not set at the maximum repayment cap.

57 Middle-income here is defined as approximately the income range in the middle-income quintile in 2010 according to the U.S. Census Bureau. High-income reflects the income range that begins at the fourth-highest income quintile. See: United States Census Bureau, *Table H-1: Income Limits for Each Fifth and Top 5 Percent* (accessed 25 September 2012). Available: http://www.census.gov/hhes/www/income/data/historical/household/2011/H01AR_2011.xls.

58 Loans are forgiven after 25 years in the case of Old IBR. Borrowers with $40,000 to $59,000 in debt can repay over 25 years under the consolidation plan.

59 "Trends in Student Aid 2011," College Board Advocacy and Policy Center (2011): 4, http://trends.collegeboard.org/

downloads/Student_Aid_2011.pdf. Average debt per borrower was $28,100 for bachelor's degree recipients attending a private institution, and $22,000 for borrowers who attended a public institution in 2010.

60 The exception to this tendency is a borrower who is eligible for and enrolls in New IBR and whose income increases rapidly after enrolling such that he hits the maximum payment cap early in his repayment term, and his income remains at a high level. Such a borrower would incur the incremental costs associated with borrowing above $60,000.

61 High-income reflects the income range that begins at the fourth-highest income quintile. See: United States Census Bureau, *Table H-1: Income Limits for Each Fifth and Top 5 Percent* (accessed 25 September 2012). Available: http://www.census.gov/hhes/www/income/data/historical/household/2011/H01AR_2011.xls.

62 Under Old IBR a borrower with $80,000 in federal student loans at a 7.0 percent interest rate can earn an AGI no higher than $92,000 before he would have to pay at the maximum rate. Under New IBR, the same borrower can earn an AGI of approximately $130,000 before he must repay at the maximum rate.

63 Under Old IBR, lower monthly payments would mean that the borrower ends up paying higher payments in his later years and for longer as he works to pay off the interest his loans accrued. But New IBR's loan forgiveness after 20 years of repayment means lower initial payments do not translate into higher payments later and for longer as they would under Old IBR. The loans are forgiven before unpaid interest can increase a borrower's repayment term.

64 U.S. Bureau of Labor Statistics, *Education Pays...* (accessed 25 September 2012). Available: http://www.bls.gov/emp/ep_chart_001.htm.

65 Jennifer Liberto, "Student Loan Payback Gets White House Attention," *CNNMoney*, http://money.cnn.com/2012/06/13/pf/college/student-loans/index.htm. Catherine Groux, "Obama Administration Strives to Increase Awareness of Income-Based Repayment Program," *U.S. News*, http://www.usnewsuniversitydirectory.com/articles/obama-administration-strives-to-increase-awareness_12439.aspx. One advocacy organization, the National Consumer Law Center, is more circumspect in how it recommends policymakers promote IBR. The organization recommends that policymakers make IBR a default repayment plan in limited circumstances, such as when a borrower has already become delinquent on a federal student loan.

66 On a U.S. Department of Education website that lists the advantages and disadvantages of IBR, the following statement appears: "You may pay more interest—A reduced monthly payment in IBR generally means you'll be repaying your loan for a longer period of time, so you may pay more total interest over the life of the loan than you would under other repayment plans." See: U.S. Office of Federal Student Aid, *If your student loan debt is high but your income is modest, you may qualify for the Income-Based Repayment Plan (IBR)* (accessed 25 September 2012), http://studentaid.ed.gov/repay-loans/understand/plans/income-based.

67 "STOP wasting your money on Student Loan Payments," *The Advantage Group* (accessed 25 September 2012), http://www.ibrloan.com/student-debt/schools/cwsol.html.

68 76 *Fed Reg.* 34385-34539 (13 June 2011). Available: http://www.gpo.gov/fdsys/pkg/FR-2011-06-13/pdf/2011-13905.pdf.

69 Ibid., 34407-34410.

70 The recommended IBR would capitalize a borrower's accrued unpaid interest once his payments under IBR exceed what he would be required to pay under the standard 10-year repayment plan based on his original loan balance. This is consistent with the practice currently under both Old and New IBR.

71 "Adrian College," *U.S. News & World Report* (accessed 02 October 2012), http://colleges.usnews.rankingsandreviews.com/best-colleges/adrian-college-2234.

72 A dependent undergraduate borrower can borrow a maximum of $5,500 in her first year, $6,500 in her second, and $7,500 each year thereafter. After four years of borrowing at the max, she reaches a total principal balance of $27,000. However, Unsubsidized Stafford loans accrue interest while a borrower is enrolled in school. Heather's loan balance therefore reflects the principal and accrued interest from the time she was in school. Her total interest over that time is $4,352,

making her total balance at repayment $31,352. That calculation is as follows: (5500+((5500*.068)*4))+(6500+((6500*.068)*3))+(7500+((7500*.068)*2))+(7500+((7500*.068)*1)).

73 This example is based on an actual person highlighted as a successful student on the career planning page of the Adrian College website. Available: http://www.adrian.edu/career_planning/index.php. The salaries in the example are based on data from Payscale.com.

74 Heather should probably begin amassing some savings by this point so that in her 20th year she will be able to pay off the taxes she will owe when her loan is forgiven.

75 Her AGI is $60,690 at that time, but this figure is discounted to the present at an annual rate of 2.5 percent to calculate what federal income tax bracket would apply at the time, assuming no change to current law.

76 Eric took out $4,000 in Unsubsidized Stafford loans in each of his first two years and $5,000 in each of his third and fourth years, reaching a total principal balance at the end of four years of $18,000. However, Unsubsidized Stafford loans accrue interest while a borrower is enrolled in school. Eric's loan balance therefore reflects the principal and accrued interest from the time he was in school. His total interest over that time is $2,924, making his total balance at repayment $20,924. That calculation is as follows: (4000+((4000*.068)*4))+(4000+((4000*.068)*3))+(5000+((5000*.068)*2))+(5000+((5000*.068)*1)).

77 Eric took out $4,000 in Unsubsidized Stafford loans in each of his first two years and $5,000 in each of his third and fourth years. Note 76 explains how accruing interest is calculated while Eric is in school. When Eric attends graduate school, his loans from undergraduate school accrue interest for two additional years before entering repayment to reflect his time in graduate school.

78 After 11 years of payments under Old IBR, Eric's loan balance is still $53,821, about the same balance he had when he began repaying. While that would make his payments $376 per month under fixed-rate consolidation—lower than under IBR—those payments are spread out over a new 25-year repayment term. His total repayment term would then be 36 years (11 years in IBR, 25 years in consolidation), making his total payments over that time $158,000. Eric opts to stay in IBR because he believes that he would receive loan forgiveness well before he would pay off a new consolidation loan.

79 Ryan Lytle, "10 Law Schools that Lead to the Most Debt," *U.S. News & World Report*, 22 March 2012, http://www.usnews.com/education/best-graduate-schools/the-short-list-grad-school/articles/2012/03/22/10-law-schools-that-lead-to-the-most-debt.

80 "Cost of Attendance (Student Budget)," California Western School of Law (accessed 25 September 2012), http://www.cwsl.edu/main/default.asp?nav=financial_aid.asp&body=financial_aid/cost_of_attendance.asp. For employment survey, see: "Employment Survey Class of 2010," California Western School of Law, http://www.cwsl.edu/content/career_services/Final_2010_ERSS_summary_sheet_6-27-12.pdf.

81 Average indebtedness is closer to $150,000 for graduates of Cal Western. See Ryan Lytle, "10 Law Schools that Lead to the Most Debt," *U.S. News & World Report*, 22 March 2012, http://www.usnews.com/education/best-graduate-schools/the-short-list-grad-school/articles/2012/03/22/10-law-schools-that-lead-to-the-most-debt. Robert paid off his undergraduate debt before enrolling in law school. To pay for law school, he borrows $20,500 in Unsubsidized Stafford loans (the annual maximum for graduate students) at a 6.8 percent interest rate each year of school. He borrows an additional $15,000 a year in Grad PLUS loans for each of the three years at a 7.9 percent rate. All of his loans accrue interest while he is in school. When he leaves school after three years of enrollment, he therefore has a principal and interest balance of $121,974 with a weighted average interest rate of 7.375 percent under the consolidation plan. That interest rate is used for the IBR calculations throughout this example.

82 His original loan balance of $121,974 after four years in IBR is now $132,754 because he has been making payments that are too low to pay off the interest that accrues monthly. If he were to switch into consolidation at this point he would have a new loan of that amount with a new 30-year term, making his monthly payments $916, higher than if he remains in IBR, and much higher than if he had chosen consolidation when he first began repayment.

83 This figure is a present value calculation over 20 years with a discount rate of 2.5 percent.

1899 L Street, NW
Suite 400
Washington, DC 20036
Phone 202 986 2700
Fax 202 986 3696

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