

## **DRAFT**

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# **Measuring the Benefits of Income-Based Repayment for Graduate and Professional Students**

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## **Summary**

In this paper we examine how the federal government's Income Based Repayment (IBR) program for student loans would affect graduate and professional students. Unlike undergraduates, graduate and professional students can finance their entire educations using federal loans, regardless of the cost. That provision has important interactive effects with the repayment rules and loan forgiveness benefits under IBR.

To measure those effects, our analysis focuses on the point at which graduate and professional students reach a "no marginal cost threshold" (NMCT) in which borrowing more to finance their educations does not increase the additional payments they would make over the life of the loan if it is repaid using IBR. We approximate that point by estimating the future incomes of specific categories of graduate and professional degree students using data from the U.S. Census Bureau's American Community Survey.

Using debt levels from the U.S. Department of Education's National Postsecondary Student Aid Study and a loan payments calculator that we developed, we find that for many graduate and professional students, the majority of borrowers are likely to borrow above the NMCT, meaning that IBR functions as a form of tuition assistance. The most significant effects occur in conjunction with Public Service Loan Forgiveness, where loans are forgiven after only 10 years of payments under IBR.

## **Introduction**

The federal government has maintained a student loan program since the 1960s, and since the early 1990s the program has been available to all undergraduate, sub-baccalaureate students,

and graduate students without regard to family income, all students, rich or poor, can take out some federal loans. Since 2006, graduate students have been able to use the program to finance the entire cost of their educations as determined by the institution they attend (in any program, for any credential, and including living expenses) without limit.

From a federal policy perspective, a government loan program is a logical tool to help ensure people can obtain a postsecondary education. In essence, a loan allows a student to move some of the future earnings that he would gain from that education to the present to finance the education itself. The government's role in sponsoring such a program is sound on a theoretical basis as well: A robust and private market for student lending is unlikely to develop due to information asymmetries and poor economies of scale (i.e. relatively small loans with multiple disbursements and long repayment terms); a private market would likely make credit most readily to those who need it least (i.e. students from more affluent families or those attending elite institutions of higher education); and a private lending market would restrict credit availability in times of economic stress, the point at which demand for higher education tends to surge.

Despite its appeal, there is a downside to a loan arrangement for the student. If his future earnings are lower than expected or erratic, he may not be able to repay the loan on time or in full and would incur penalties, fees, accrued interest charges, a damaged credit history, etc. That problem falls away, however, if the student can repay the loan as a share of his income.

That reasoning led policymakers to add such an option to the federal loan program in the mid-1990s, coupling it with loan forgiveness after 25 years of payments. That early version of income-based repayment, which remains available today, suffered from a number of limitations and has never been widely used.<sup>1</sup> Those limitations prompted student aid advocates to argue in 2006 that the program should be redesigned to make it more widely available and offer lower payments to borrowers.<sup>2</sup> Ultimately, lawmakers agreed and enacted the Income-Based Repayment program in 2007 and implemented it in 2009.

Under this version of IBR (which this paper refers to as Old IBR to distinguish it from a new version of the program) borrowers make payments equal to 15 percent of their Adjusted Gross Income after an exemption equal to 150 percent of the federal poverty guidelines adjusted for household size. Remaining debt is forgiven after 25 years of payments. All borrowers are eligible for the program if it would reduce their monthly payments below what they would pay under a 10-year fixed amortization, which is also known as the Standard Repayment plan.<sup>3</sup> Policymakers also added a new loan forgiveness provision when they enacted IBR: Public Service Loan Forgiveness. Under PSLF, borrowers using IBR who work for non-profit organizations or in a government position can have unpaid debt forgiven after 10 cumulative years of payments.<sup>4</sup>

In 2010, only months after borrowers could first enroll in Old IBR, President Obama proposed that Congress modify the program for new cohorts of borrowers by reducing monthly payments to 10 percent of discretionary income and shortening the loan forgiveness term to 20 years of payments. All other terms under IBR would be left unchanged. Congress passed this proposal in early 2010 as part of a larger health care reform bill. While this law made the New IBR terms available to new borrowers as of 2014, the Obama administration used its authority under a different statute to accelerate the start date to December 2012 for new borrowers as of October 1, 2007.<sup>5</sup> This “bridge” program is called Pay As You Earn. This paper refers to both Pay As You Earn and the IBR that begins for new borrowers in 2014 as “New IBR.” The terms of the two programs are virtually identical with only one minor exception.<sup>6</sup>

### **Understanding New IBR**

Leading up to the enactment of New IBR and its accelerated implementation, the policymaking community held a limited understanding of how the changes would affect borrowers. A typical example of the advantages of New IBR used by proponents of the plan would simply display the monthly payment that a borrower would pay based on a stated income as compared to repaying his loan in Standard Repayment.<sup>7</sup> Stakeholder organizations argued for the proposal after it was announced, noting only that it was “expanding” the existing program or making payments “even more affordable” than Old IBR. The bill was not considered in committee, no hearings were held, and the measure ultimately passed as part of a student aid reform bill that was part of the landmark 2010 health insurance reform law, the Affordable Care Act.

To better understand how New IBR would affect borrowers over their entire repayment terms (rather than one month at a time), in 2012 we developed a calculator that incorporates all of the repayment parameters and rules (i.e. income exemption, interest accrual, loan forgiveness, etc.) for both New and Old IBR to compare how the changes would affect different types of borrowers based on various debt and income scenarios. That is, our analysis examined how the program would work over a borrower’s entire 20- or 25-year repayment term. In fact, using a calculator like the one we developed is the only way to understand how the multiple repayment terms in the program interact over many years with other factors such as inflation, interest accrual, income changes, and changes in household size.

Using the calculator, we analyzed hundreds of hypothetical borrower scenarios and published our findings in a 2012 paper.<sup>8</sup> One of our main conclusions was that the changes to IBR made the program much more generous than was commonly understood, particularly for graduate students. Borrowers with debt from graduate school, despite earning high incomes, stand to have substantial debts forgiven. Under Old IBR, such a scenario would be highly unusual. Moreover, New IBR can work like tuition assistance for graduate students because a borrower can still qualify for substantial amounts of loan forgiveness even when he earns an income that

is average relative to national or peer incomes. Meanwhile, New IBR provides relatively small increases in benefits for undergraduate students and lower-income borrowers.<sup>9</sup>

### **Graduate Students and the “No Marginal Cost Threshold”**

In this paper, we delve more deeply into the benefits that New IBR will provide to graduate and professional students, using our prior work as a foundation. Our findings from that initial work suggest that the policy and market implications of the New IBR are significant in the graduate and professional education arena; namely, that New IBR acted as a form of tuition assistance through back-end loan forgiveness. However, that work relied on somewhat generic (though plausible) debt and income scenarios. Lack of real income data made it difficult to gauge the size and scope of the tuition-assistance effect and what types of degree programs could be most affected.<sup>10</sup> Furthermore, our initial work did not factor in Public Service Loan Forgiveness. That benefit applies to 25 percent of jobs in the economy due to the government’s very broad definition of “public service” and makes the benefits we highlighted in our initial work several times larger because loan forgiveness occurs after only 10 years of payments.<sup>11</sup>

There are three components needed for our more detailed analysis of how New IBR will affect graduate education: (1) the terms of New IBR, (2) estimates of what graduates earn over the repayment term, and (3) and the amount of debt a graduate would incur in financing the education, or relatedly, the cost of that education. Because we have already developed a calculator for New IBR we have the information we need for the first part. That leaves us to develop estimates of the incomes graduate and professional degree holders will earn over the next 20 years, and a measure of what it costs to obtain that credential.

For the income estimates, we opted to estimate incomes by profession rather than lump together broader categories of graduate and professional degrees, such as all Masters of Arts, or all Masters of Science. That allows for more distinctions in probable earnings between different professions. Moreover, many students who seek a graduate or professional degree do so to obtain employment or advancement in a defined field. For example, a student seeking a Juris Doctor typically intends to practice law or work in a field that requires that credential; a student pursuing a Master of Education likely intends to work in primary or secondary education; and so on. Thus, we can link specialized graduate and professional degrees to a specific career and income path.

Obtaining good information on what graduate students borrow and what specific programs cost is more problematic. Programs for the same graduate credential can have a range of costs, students can incur debt to finance a wide range of living costs, and they can attend part-time or full-time.<sup>12</sup> Those variables make it difficult to pinpoint the cost (and debt incurred) of a particular graduate or professional credential. To provide context, our analysis includes debt

levels for graduate and professional students by broad degree-type category as reported by the federal government, but they are not central to the findings presented in this paper and should not be over-interpreted. Instead, what students would repay any given level of debt based on their projected income is the important indicator.

#### Matching NPSAS Debt/Degree Categories

Graduate Programs by NPSAS Categories	Degree-Profession Profile	Debt By Percentile*		
		25th	50th	75th
Education (any master's)	Teachers	\$18,000	\$35,000	\$70,000
Other master of arts (MA)	Reporter	\$25,000	\$45,000	\$73,000
	Social Worker			
	Speech Pathologist			
Other master of science (MS)	Engineer	\$17,000	\$44,000	\$64,000
Other health science degree	Pharmacist	\$65,000	\$107,000	\$153,000
	Nurse			
	Veterinarian			
Law (LLB or JD)	Lawyer	\$66,000	\$94,000	\$138,000

Sources: *New America Foundation, U.S. Department of Education National Postsecondary Student Aid Survey 2008*

\*Cumulative debt for completers at graduation. Adjusted for inflation to constant 2012 dollars. Includes undergraduate and graduate debt.

Instead of using cost or debt levels for our analysis, we use a “no marginal cost threshold” (NMCT) as our focus. Because we already know the terms of New IBR and have built them into a calculator, we can determine how much an individual would repay on his student loans once we have estimated his future income over 20 years. That is, repayment amount is a function of income. We can also find the level of debt at which he ceases to incur any increases in his future loan payments if he borrows an additional dollar. Taking on more debt at that point increases only how much debt he has forgiven after 10 or 20 years, not his monthly or total payments.

The NMCT concept may best be understood in relation to a traditional loan. Under a traditional loan arrangement, the more a student borrows, the more he must repay. Under New IBR, for a set income level and path, there must be an amount of debt where that relationship ends, and the more a student borrows the more he has forgiven.

This NMCT is a convenient indicator for identifying the implications of New IBR. If that point is below what a graduate degree costs, then most borrowers holding those degrees will receive

loan forgiveness. Schools could also raise prices with impunity as those increases are borne by the federal government through loan forgiveness, and students would be encouraged to borrow for the full cost of attendance. Alternatively, a NMCT that is far below the typical cost of a graduate degree in a particular field might indicate that the New IBR is doing what its supporters wanted – it is subsidizing socially valuable credentials that a student’s future income gains would not alone justify. There are a number of other ways to interpret the no marginal cost threshold, and we highlight those in the discussion section of this paper.

## **Methodology**

### *Estimating Incomes By Profession and Credential*

We selected eleven professions for our analysis: lawyer, pharmacist, teacher, accountant, registered nurse, social worker, reporter (journalist), engineer, speech pathologist, and veterinarian. The selection process was driven in part to present a wide range of professions that have varying earnings levels. Those were also employment categories available in our data source and specific enough to avoid noise in the self-reported data.

To generate a 20-year income trajectory for each profession, we used age-based income data reported in the American Community Survey (ACS) for 2003 to 2011 for individuals who indicated that they worked in the specified profession and held a master degree or higher level of education. The data does not allow us to confirm that the respondent held a degree that matches that profession; however, we selected professions where that would generally be the case (i.e. a lawyer with a Juris Doctor, a social worker with a Master of Social Work). Nevertheless, it is the income of individuals in a given profession that matter most for our analysis.

Therefore, the income model roughly shows what a lawyer earns when he is 30 years old, when he is 31 years old, and so on. We assume all borrowers graduate and begin repaying their loans at age 25. Thus a 30-year-old lawyer is in his fifth year of loan repayment. We generated two categories for each income profile, one at the 50<sup>th</sup> percentile and one at the 75<sup>th</sup>. Thus the model roughly shows what a 30-year-old lawyer earns at the 50<sup>th</sup> and 75<sup>th</sup> percentile for his profession.

We chose to generate income estimates at the 50<sup>th</sup> and 75<sup>th</sup> percentile because they give a sense of where the NMCT occurs for the “typical graduate” in a given profession, and what it would be for a graduate who earns more than most of his peers, respectively. It is important to keep in mind that for borrowers who earn less, the NMCT is lower. For graduates whom one could reasonably expect to earn below the 50<sup>th</sup> percentile (e.g. a teacher who plans to teach in a rural area, graduates from the lowest-ranked law schools), the NMCT is also lower than the

figures we stated. We prefer studying the NMCT effect at the higher end of the income scale for two reasons. First, if the NMCT is low for higher income borrowers, then that means the issue occurs for the vast majority of borrowers – the same could not be said if we studied only low-income borrowers. Second, IBR is intended as a safety net for struggling borrowers, and the purpose of this paper is to draw attention to the effect of NMCT on borrowers who are not struggling, at least compared to their peers.

Because we use data over the 2003-2011 period, we first adjust all figures for inflation and convert them to 2011 dollars. Then we inflate them again to match the future year in the borrower's repayment plan. Thus, the income projections begin in 2011 and a borrower's income in his 20<sup>th</sup> year of repayment is inflated to adjust for those 20 future years.

We also aggregated the earnings information because of the limited number of respondents in a given profession at a specific age. Therefore, we used five-year age ranges to approximate earnings by age and then interpolated and extrapolated income with increases for age. For example, we use the income information for veterinarians aged 30 to 34 to approximate the earnings of a 32-year-old veterinarian and income information for veterinarians aged 35 to 39 to approximate the earnings of a 37-year-old veterinarian.

Then we interpolate incomes in the intervening years in even, incremental steps, where earlier years are lower and later years are incrementally higher. That approach tends to produce smooth increases in incomes each year in a borrower's repayment term under our models. When combined with the 2.5 percent annual inflation increases, our income projections show borrowers increasing their incomes every year in the repayment term based both on age and inflation. That effect most likely overstates borrower's income profiles because of issues like income shocks that occur over an individual's life. However, biasing a borrower's income higher than it is likely to be in reality means our analysis *overestimates* what a borrower would pay on his student loans under New IBR, *underestimates* the amount of debt that would be forgiven, and indicates that the NMCT for borrowing an additional dollar is likely *below* what we present.

#### *The New IBR Calculator and Important Repayment Assumptions*

The calculator reflects all of the repayment rules for New IBR and several important assumptions and adjustments. Annual payments are equal to 10 percent of a borrower's Adjusted Gross Income (AGI). However, AGI tends to be lower than a borrower's stated income due to pre-tax fringe benefits and above-the-line deductions and credits. The calculator adjusts for those benefits by reducing total income to reflect an AGI figure.<sup>13</sup> We assume that all borrowers make IBR payments based on only their income, exclusive of any income from a spouse, as is allowed under New IBR.<sup>14</sup>

New IBR also reduces a borrower's AGI by an exemption amount equal to 150 percent of the federal poverty guidelines, based on household size. For this paper, we assume all borrowers have a household size of one for the first five repayment years and a household size of two each year thereafter to reflect a spouse (the larger the household size, the larger the exemption).<sup>15</sup> The calculator increases the exemption by 2.5 percent each incremental repayment year to reflect adjustments for inflation.

New IBR includes a maximum payment cap based on how much debt a borrower has when entering repayment. This monthly payment cap is equal to the payment the borrower would make if he were paying his initial loan balance off on a 10-year amortization schedule. Therefore a borrower's payment cannot exceed this level while enrolled in IBR, no matter how high his income. This payment cap is also the *initial* eligibility test for enrolling in IBR. If a borrower's payments are below this cap, he may enroll in New IBR, though if they later exceed it, he is not disqualified from IBR's other important benefit: loan forgiveness.

Consistent with the rules under New IBR, interest on the loan accrues and payments are first credited to unpaid accrued interest before principal. Unpaid accrued interest during repayment is not added to the borrower's principal balance (i.e. capitalized or compounded) unless and until his payments reach the capped payment discussed above.

We set the fixed interest rate on the borrower's debt at the weighted average of the rates on Unsubsidized Stafford loans and Grad PLUS loans which were 6.8 percent and 7.9 percent respectively, in the 2012-2013 annual year. Those are still reasonable proxies despite a recent change in law that will reduce those rates in the near term, because the rates are projected to rise in the near future above the 6.8 and 7.9 percent rates.<sup>16</sup> We assume the first \$45,000 of debt a borrower incurs is Unsubsidized Stafford loans and any above that is Grad PLUS, except for medical and legal degrees, for which we assume the first \$65,000 is Unsubsidized Stafford loans, reflecting more than two years of graduate study.

Outstanding principal and interest on the loans is forgiven after 10 years of payments for PSLF and 20 years for all other cases. Loan forgiveness at the 20-year mark is taxable, although estimated tax liability is excluded for the purposes of this paper.<sup>17</sup>

## **Findings**

### *Loan Repayment Tables By Profession and Income Category*

We have arranged our findings in the tables below. There are two tables for each degree-profession category (where each profession is linked to the most likely degree they were awarded), one for a borrower earning at the 50<sup>th</sup> percentile and one for a borrower earning at the 75<sup>th</sup> percentile in that degree-profession category. The "Debt Level For Completer" column



states the cumulative undergraduate and graduate debt levels for program completers, of those who borrowed, reported in the 2007-2008 National Postsecondary Student Aid Study (NPSAS) database in 2012 dollars at the 25<sup>th</sup>, 50<sup>th</sup> and 75<sup>th</sup> percentiles of indebtedness. NPSAS includes a few general categories for graduate and professional students and we attempted to match the best NPSAS category with the degree-profession categories in this analysis. Again, these figures are shown for general context and we do not mean to suggest that they represent accurate measures of indebtedness for the given degree-profession categories. We were able to find debt figures by profession or specialized degree type in some cases (veterinarians), in other cases only the mean is reported, but for most we cannot find information. Thus, for consistency, we use only the NPSAS figures.<sup>18</sup>

The “Debt Level for IBR No Marginal Cost” columns shows the level of debt at which a student in the stated degree-profession category, earning at the percentile indicated in the table title, would bear no incremental cost in repayment if he borrowed an additional dollar. Under that heading, PSLF indicates where that point is for a borrower who qualifies for loan forgiveness after 10 years of payments under Public Service Loan Forgiveness. We assume the borrower makes his qualifying payment consecutively and all in the first 10 years of repayment, although eligibility is based on cumulative payments at any point in the repayment term. The figure under 20-yr indicates the “no marginal cost threshold” for borrowers who do not qualify for PSLF and have their debt forgiven after 20 years of payments.

Lastly, on the left side of the table, “Total Payments PSLF” and “Total Payments 20-yr” shows the total principal and interest payments the borrower in the stated degree-profession category would make for the corresponding debt level indicated at the top of the column. The payments are discounted to the present at a rate of 2.5 percent.

As a rule, a borrower’s total payments for a debt level above the “no marginal cost threshold” will not exceed the payments he would make for a debt level at the “no marginal cost threshold”. For example, if the no marginal cost threshold is \$61,000, the borrower’s total payments will be the same if he leaves schools with a loan balance of exactly that amount or any amount greater than that.

**Social Worker With MSW Earning at the 75th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$25,000	\$45,000	\$73,000	\$23,000	\$37,000
<b>Total Payments PSLF<sup>3</sup></b>	\$19,621	\$19,621	\$19,621	\$19,621	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$36,508	\$48,113	\$48,113	-	\$48,113

*Nominal income in repayment years 1 and 20: \$40267--\$97448*

**Social Worker With MSW Earning at the 50th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$25,000	\$45,000	\$73,000	\$14,000	\$23,000
<b>Total Payments PSLF<sup>3</sup></b>	\$9,647	\$9,647	\$9,647	\$9,647	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$26,710	\$26,710	\$26,710	-	\$26,710

*Nominal income in repayment years 1 and 20: \$29232--\$75738*

**Nurse With Masters Earning at the 75th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$65,000	\$107,000	\$153,000	\$44,000	\$61,000
<b>Total Payments PSLF<sup>3</sup></b>	\$43,257	\$43,257	\$43,257	\$43,257	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$92,853	\$92,853	\$92,853	-	\$92,853

*Nominal income in repayment years 1 and 20: \$62318--\$142372*

**Nurse With Masters Earning at the 50th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$65,000	\$107,000	\$153,000	\$31,000	\$43,000
<b>Total Payments PSLF<sup>3</sup></b>	\$29,825	\$29,825	\$29,825	\$29,825	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$64,944	\$64,944	\$64,944	-	\$64,944

*Nominal income in repayment years 1 and 20: \$44590--\$109177*

**Pharmacist With Pharm.D. Earning at the 75th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$65,000	\$107,000	\$153,000	\$77,000	\$101,000
<b>Total Payments PSLF<sup>3</sup></b>	\$70,780	\$74,923	\$74,923	\$74,923	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$85,197	\$159,707	\$159,707	-	\$159,707

*Nominal income in repayment years 1 and 20: \$72669--\$188767*

**Pharmacist With Pharm.D. Earning at the 50th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$65,000	\$107,000	\$153,000	\$54,000	\$84,000
<b>Total Payments PSLF<sup>3</sup></b>	\$41,272	\$41,272	\$41,272	\$41,272	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$100,624	\$109,898	\$109,898	-	\$109,898

*Nominal income in repayment years 1 and 20: \$37360--\$162277*

**Lawyer With JD Earning at the 75th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$66,000	\$94,000	\$138,000	\$98,000	\$169,000
<b>Total Payments PSLF<sup>3</sup></b>	\$67,021	\$77,432	\$77,816	\$77,816	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$88,999	\$141,505	\$203,042	-	\$211,686

*Nominal income in repayment years 1 and 20: \$66752--\$282852*

**Lawyer With JD Earning at the 50th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$66,000	\$94,000	\$138,000	\$46,000	\$85,000
<b>Total Payments PSLF<sup>3</sup></b>	\$37,270	\$37,270	\$37,270	\$37,270	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$94,183	\$99,888	\$99,888	-	\$99,888

*Nominal income in repayment years 1 and 20: \$39173--\$164101*

**Engineer With Masters Earning at the 75th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$18,000	\$35,000	\$56,000	\$65,000	\$103,000
<b>Total Payments PSLF<sup>3</sup></b>	Ineligible	\$41,933	\$52,398	\$53,350	-
<b>Total Payments 20-yr<sup>3</sup></b>	Ineligible	\$43,753	\$78,858	-	\$134,963

*Nominal income in repayment years 1 and 20: \$71922--\$192770*

**Engineer With Masters Earning at the 50th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$18,000	\$35,000	\$56,000	\$44,000	\$70,000
<b>Total Payments PSLF<sup>3</sup></b>	Ineligible	\$39,079	\$41,010	\$41,010	-
<b>Total Payments 20-yr<sup>3</sup></b>	Ineligible	\$45,057	\$86,490	-	\$95,761

*Nominal income in repayment years 1 and 20: \$56535--\$158375*

**Accountant With Masters Earning at the 75th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$25,000	\$45,000	\$73,000	\$53,000	\$94,000
<b>Total Payments PSLF<sup>3</sup></b>	Ineligible	\$45,868	\$47,361	\$47,361	-
<b>Total Payments 20-yr<sup>3</sup></b>	Ineligible	\$60,130	\$115,391	-	\$123,047

*Nominal income in repayment years 1 and 20: \$63099--\$178062*

**Accountant With Masters Earning at the 50th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$25,000	\$45,000	\$73,000	\$33,000	\$47,000
<b>Total Payments PSLF<sup>3</sup></b>	\$29,290	\$33,078	\$33,078	\$33,078	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$31,515	\$68,130	\$70,970	-	\$70,970

*Nominal income in repayment years 1 and 20: \$49704--\$118698*

**Veterinarian Earning at the 75th Percentile by Age**

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$65,000	\$107,000	\$153,000	\$69,000	\$106,000
<b>Total Payments PSLF<sup>3</sup></b>	\$57,005	\$57,387	\$57,387	\$57,387	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$91,753	\$138,083	\$138,083	-	\$138,083

*Nominal income in repayment years 1 and 20: \$72447--\$195825*

### Veterinarian Earning at the 50th Percentile by Age

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$65,000	\$107,000	\$153,000	\$29,000	\$41,000
<b>Total Payments PSLF<sup>3</sup></b>	\$31,960	\$31,960	\$31,960	\$31,960	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$60,088	\$60,088	\$60,088	-	\$60,088

Nominal income in repayment years 1 and 20: \$59298--\$89130

### K-12 Teacher With Masters Earning at the 75th Percentile by Age

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$18,000	\$35,000	\$70,000	\$22,000	\$36,000
<b>Total Payments PSLF<sup>3</sup></b>	\$19,123	\$19,471	\$19,471	\$19,471	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$23,579	\$46,528	\$46,611	-	\$46,611

Nominal income in repayment years 1 and 20: \$37391--\$96943

### K-12 Teacher With Masters Earning at the 50th Percentile by Age

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$18,000	\$35,000	\$70,000	\$12,000	\$22,000
<b>Total Payments PSLF<sup>3</sup></b>	\$11,179	\$11,179	\$11,179	\$11,179	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$26,803	\$27,635	\$27,635	-	\$27,635

Nominal income in repayment years 1 and 20: \$26961--\$75381

### Speech Pathologist With Masters Earning at the 75th Percentile by Age

	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$25,000	\$45,000	\$73,000	\$28,000	\$42,000
<b>Total Payments PSLF<sup>3</sup></b>	\$29,348	\$30,528	\$30,528	\$30,528	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$31,445	\$61,774	\$61,774	-	\$61,774

Nominal income in repayment years 1 and 20: \$51023--\$104439

<b>Speech Pathologist With Masters Earning at the 50th Percentile by Age</b>					
	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$25,000	\$45,000	\$73,000	\$20,000	\$27,000
<b>Total Payments PSLF<sup>3</sup></b>	\$19,767	\$19,767	\$19,767	\$19,767	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$36,874	\$38,592	\$38,592	-	\$38,592
<i>Nominal income in repayment years 1 and 20: \$37822--\$81810</i>					

<b>Reporter With MA Earning at the 75th Percentile by Age</b>					
	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$25,000	\$45,000	\$73,000	\$35,000	\$50,000
<b>Total Payments PSLF<sup>3</sup></b>	\$28,127	\$31,260	\$31,260	\$31,260	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$32,143	\$68,986	\$71,642	-	\$71,642
<i>Nominal income in repayment years 1 and 20: \$46867--\$125831</i>					

<b>Reporter With MA Earning at the 50th Percentile by Age</b>					
	Debt Level for Completers <sup>1</sup>			Debt Level for IBR "No Marginal Cost" <sup>2</sup>	
	Low	Avg	High	PSLF	20-yr
	\$25,000	\$45,000	\$73,000	\$17,000	\$26,000
<b>Total Payments PSLF<sup>3</sup></b>	\$16,338	\$16,338	\$16,338	\$16,338	-
<b>Total Payments 20-yr<sup>3</sup></b>	\$34,394	\$34,400	\$34,400	-	\$34,400
<i>Nominal income in repayment years 1 and 20: \$33191--\$80135</i>					

**Notes to the Tables**

PSLF is Public Service Loan Forgiveness; borrower's debt is forgiven after 10 years of payments in IBR. For all other borrowers in IBR, debt is forgiven after 20 years of payments, denoted as "20-yr" in the tables.

1. "Low" is 25th percentile, where 25 percent of degree completers finish with the stated debt level or less; "Avg" is 50th percentile; "High" is 75th percentile. Excludes students with no debt. From NPSAS 2007-08, in 2012 dollars, for general degree categories except for JD and Masters of Education, categories NPSAS breaks out in the data.

2. Borrower incurs no cost in borrowing an additional dollar above the stated debt level, excluding potential taxes that apply to amounts forgiven under IBR 20-yr. No taxes apply to debt forgiven under PSLF.

3. Total payments under each plan are the present discounted value of all principal and interest payments made under that plan during the duration of the loan.

## Discussion

Our analysis and discussion exclude the effects of the tax incidence of loan forgiveness after 20 years of payments under the New IBR. (Loan forgiveness for PSLF is tax-free.) We assume lawmakers will make loan forgiveness tax-free. Policymakers will come under intense pressure to exempt loan forgiveness from federal income tax, and we believe that they will act in the coming years to adopt that policy. President Obama and several key lawmakers already support the change.

### *Public Service Loan Forgiveness*

The NMCT for borrowers who qualify for PSLF is perhaps one of the most significant figures in the tables. The point at which a borrower bears no incremental cost in borrowing more (or accruing more interest while in school) is quite low relative to what many graduate and professional degrees cost, without even factoring in what students may borrow for their living costs, what they may have borrowed in undergraduate debt, and the interest they would accrue on their federal loans while in school. This suggests that through the New IBR, the federal government has provided a very large source of tuition assistance for graduate and professional student who work in the governmental or not-for-profit sectors. It will not be rare for the federal government to pay for a student's entire graduate education via loan forgiveness under PSLF.

Imagine a student who, having already accumulated a loan balance of \$29,000 during her undergraduate studies, pursues a Master of Social Work and borrows the entire cost of the education, including living expenses. Assume she earns at the 75<sup>th</sup> percentile for social workers by age for her first 10 years after graduate school. Because she began the program with debt well in excess of the NMCT (\$23,000), every dollar she borrows will be forgiven by the federal government and will not increase her payments beyond those she would make on the debt she accumulated in undergraduate studies.

By contrast, it would be almost impossible for an undergraduate student to fully finance an undergraduate degree through PSLF. Annual and aggregate loan limits in the federal loan program that apply to undergraduates are generally set below or near the NMCT for all but the lowest-paid professions we profiled. Even for the lowest-paid professions (e.g. teachers), borrowers still incur costs for the initial amounts that they borrow as undergraduates.

It is important to understand that "public service" for PSLF is quite broad and borrowers who one might not consider employed in public service jobs will qualify for loan forgiveness after 10



years. Employment at any 501(c)(3) tax-exempt non-profit qualifies, and any government position (state, federal, local, and tribal) also qualifies. This is why the federal government estimates about 25 percent of all forms of employment qualify.<sup>19</sup> An individual with a master's in accounting who works for non-profits for 10 years would qualify to have any outstanding debt forgiven under PSLF. Certain categories of students will pursue graduate degrees knowing that they will *only* work in PSLF-qualified employment, such as teachers and social workers.

### *Stafford Loans Alone Allow For Significant Loan Forgiveness*

Our 2012 paper showed how high income borrowers could qualify for loan forgiveness by amassing high debt balances through the Grad PLUS program. That program allows graduate students to borrow whatever a school charges (plus living costs as determined by the school) once they have exhausted the annual (\$20,500) or aggregate (\$138,500) Stafford loan limit.

Some observers have since characterized the surprising benefits of the New IBR for graduate students as the result only of the lack of borrowing limits for Grad PLUS.<sup>20</sup> This analysis shows, however, that in many of the cases we profile, borrowers will reach the NMCT well before they would have to access Grad PLUS loans. This is even more so the case if a borrower enters graduate school with a debt from undergraduate studies.

A student who borrows the maximum in undergraduate loans over five years would enter graduate school with a balance of about \$34,000 (including accrued interest) and if he attends graduate school for two years and borrows the maximum in Stafford loans, his combined loan balance (including accrued interest from both sets of loans) would total approximately \$80,000 in Stafford loans alone. That figure exceeds the NMCT for all but the highest earning cases we profiled.

### *Declining Marginal Costs for More Debt*

Even though our analysis focuses on the NMCT, as a borrower's debt level approaches that point, the incremental cost of borrowing an additional dollar begins to decline. It is as if the borrower faces a declining interest rate (and even a negative interest rate) the more he borrows as he approaches the NMCT. This effect occurs because the borrower is having *some* of the added cost of borrowing more forgiven, but it also marginally increases his total payments – he has not yet reached the point at which all of it will be forgiven. Thus, borrowers face declining costs in borrowing additional sums before their debt reaches the NMCT.

For example, the lawyer earning at the 50<sup>th</sup> percentile by age, who repays for 20 years, pays a total of \$94,183 (present value) when he enters repayment with a \$66,000 balance; when he

enters repayment with a balance of \$85,000, or \$19,000 more, his total payments increase by only \$5,705 (present value) over the same 20-year repayment term. Under a standard loan arrangement where the debt is fully repaid over a 20-year term in equal installments, borrowing an additional \$19,000 at an interest rate of approximately 7 percent would add much more than \$5,705 (present value) to a borrower's payments.

### *Payments for Average Versus High Debt Levels*

While the cumulative debt figures we use for program completers are for broad graduate and professional degree candidates, they help to illustrate an important point. In the vast majority of cases, borrowers make payments under the New IBR (in both PSLF or 20-year forgiveness) that are identical (or nearly identical) for both the average and high debt levels. That is because the NMCT is generally fairly close to average debt levels in most of the cases.

This dynamic could have a significant impact on students' decisions about what schools to attend and how much to borrow. It could make attending an averaged-priced program the same cost as attending the highest-cost program, with the difference subsidized completely through loan forgiveness. Alternatively, a student who might consider using his own funds to finance some of his education, or work part-time to finance his education, could decide that on the margin, whatever those choices would save him in future loan payments would simply be forgiven under the New IBR and he should therefore borrow rather than use his own resources.

Schools also face altered incentives when borrower payments are the same for average and high debts. If a school is aware that the average amount of debt that students graduate with is above the NMCT for students who earn at the 75<sup>th</sup> percentile (or even higher), then any incremental price increases will be borne by the federal government through loan forgiveness, provided the students use federal loans to finance those costs. For this scenario the school might ensure that the students are aware of this dynamic so that they are price insensitive at amounts that exceed the NMCT, or it might simply work its way into the graduate school marketplace as schools raise prices without any drop-off in demand.

### *Benefits Available Only to Those Who Borrow*

Most people are debt averse and virtually everyone understands that the more someone borrows the more he must ultimately repay. New IBR, however, can reward those who err on the side of borrowing more to finance their graduate educations rather than less. For a student to have his graduate education fully financed through loan forgiveness, he must first use federal loans to pay for his entire education. Borrowing is a precondition to earn the benefit.

Some observers may argue that it is still prudent for students to borrow only what they need in case their incomes end up higher than expected and or if they up qualifying for loan forgiveness after 20 years when their intention was to qualify for forgiveness under PSLF at 10 years. That is a somewhat misguided belief. The upside to borrowing more is that a borrower could have more forgiven, and the downside is that he could have to repay it. Yet the downside scenario must by definition occur only if the borrower earns a higher income than he expected, which means he has the income to repay the loan. Moreover, payments would still be capped at a share of his income and are no more or less affordable than had he borrowed less. Under New IBR, borrowing more is an asymmetrical bet: the potential payoff is large and likely; the potential loss is unlikely, and will be small even if it occurs.

#### *Implications for Scholarships and School-Provided Financial Aid*

Some graduate and professional programs provide financial aid to certain students. Other organizations also offer scholarships for graduate and professional studies. The New IBR may change whether, how, and to whom schools and other organizations provide this aid. Schools and scholarship providers may see the aid they are providing as supplanting loans that would have been forgiven by the federal government anyway. They may then put that money to other uses.

For example, a student who borrows \$10,000 more than the NMCT for his degree-profession combination effectively receives a \$10,000 grant up-front from the federal government to finance his education. His financial situation would be unchanged had he received the same amount from his school or a third-party in the form of a scholarship. Either way he receives \$10,000.

#### *Examples of Behavioral Changes in the Market*

When scanning the market for examples of school and student responses to New IBR, it is important to keep in mind that the program has been available only since December 2012. That was the date at which eligible borrowers could first enroll. Moreover, the eligible cohorts of borrowers who would be out of school and in repayment – those who started borrowing more recently – is limited. Thus, student and school familiarity with the program is likely still in its very early stages. Even so, some early examples have emerged that illustrate how schools and students are responding to the benefits of New IBR.

Financial planners and consultants are helping clients understand the program, how to use it, and how to optimize the benefits it provides. This is not completely surprising given that the program is new and its benefits are not widely known, particularly that it can provide benefits to borrowers who have moderate and high incomes. Many of the terms and rules for IBR are complicated and thus lend themselves to financial planning services like those for federal

income tax preparation or retirement savings where individuals can take actions that will reduce their monthly and total payments, significantly boosting the debt that they have forgiven, and thereby justifying fee-for-service financial planning.

One business that offers such services to both individual borrowers *and other financial planners* is The Advantage Group. The business describes itself as, “an analytics company that provides financial professionals and college graduates with information about Student Loan repayment options and financial products.” The Advantage Group advertises that IBR can “reduce student loan payments and forgive tens, even hundreds of thousands of dollars.”

Graduate and professional schools are also starting to inform current and prospective students about the benefits of New IBR. Most of these are focused on the benefits of PSLF. Many law schools offer special repayment programs for borrowers who use the New IBR combined with PSLF whereby the school pays a portion or all of a former student’s loan payments as long as he earns below a certain income threshold. Georgetown’s law school aggressively markets the benefits of its program to current and prospective students with seminars and other materials. A video recording of one such seminar includes testimonials from former students enrolled in the program who say the program allows them to take jobs with lower salaries and “ignore” debt balances, which often exceed \$100,000.<sup>21</sup>

## **Conclusion**

While policymakers enacted the New IBR to help make the cost of a postsecondary education affordable, the policy is likely to have effects far beyond that goal. The same can be said for PSLF, which policymakers enacted to make it easier for individual with student loans to pursue a career in public service. The findings in this paper show that the repayment terms policymakers designed for New IBR are unlikely to cause many graduate and professional students to fully repay their loans – even if they earn a competitive salary in their chosen careers. That should provide an incentive for graduate and professional students to borrow more rather than less, particularly for some professions. It should also make graduate students less sensitive to the price of a graduate or professional degree, allowing institutions to charge higher tuitions, especially for certain programs where borrowers could qualify for PSLF.

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<sup>1</sup> The program, called “Income Contingent Repayment” requires borrowers to make payments equal to 20 percent of Adjusted Gross Income after an exemption equal to the federal poverty guidelines. Borrowers can often obtain much lower payments under other repayment options that are fully amortizing and not based on income, by extending the duration of the loan and by making payments that slowly increase over time. Moreover, borrowers must have loans under the Direct Loan program to use Income Contingent Repayment, which up until about 2010 represented only averaged about 25 percent of loan issuance. Most loans were made by private lenders and backed by the federal government, but were not eligible for the early

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<sup>2</sup> Their most compelling argument was that a borrower who defaulted on his loans and had his wages garnished by the U.S. Department of Education would pay roughly the same share of his income as under the Income Contingent Repayment plan. See: Baum, S. & Schwartz, S. (2006) *How much debt is too much debt? Defining benchmarks for manageable student debt*. New York, NY: The College Board: <http://research.collegeboard.org/sites/default/files/publications/2012/9/researchinreview-2006-12-benchmarks-manageable-student-debt.pdf> which was cited by advocates to make the case for payments based on smaller share of income than under the Income Contingent Repayment option. See also: Shireman, R., Asher, L., Talwalker, A., Li, S., Irons, E., & Cota, R. (2006) *Addressing student loan repayment burdens*. Washington, DC: The Project on Student Debt: [http://projectonstudentdebt.org/files/pub/WHITE\\_PAPER\\_FINAL\\_PDF.pdf](http://projectonstudentdebt.org/files/pub/WHITE_PAPER_FINAL_PDF.pdf)

<sup>3</sup> For example, if a borrower's monthly payment based on a 10-year amortization schedule is \$300, but his payments based on the IBR formula would be \$290, he qualified to enroll in IBR. If his income later increases such that his payments would exceed the amount he would pay on a 10-year amortization, then his payment are capped at \$300 but he may remain enrolled in IBR.

<sup>4</sup> When Old IBR was debated in 2007, lawmakers focused exclusively on the loan forgiveness benefits of the program for borrowers in public service jobs. They viewed that provision as the main legislative change; few mentioned that the program would allow borrowers to make lower monthly payments than Income Contingent Repayment.

<sup>5</sup> A "new borrower" is someone who takes out a federal student loan for the first time on or after that date. Someone who borrowed initially prior to that date but repaid the earlier loans in full before borrowing again on or after that date is also considered a "new borrower."

<sup>6</sup> The only difference is that Pay As You Earn includes a limit on how much interest can be capitalized at a certain point in repayment, but it does not limit how much interest can accrue. This is unlikely to have any effect on most borrowers, and a negligible effect on a the limited universe of borrowers with high debt balances – over \$50,000 – who experience prolonged low incomes with sudden, large increases in incomes that are sustained.

<sup>7</sup> A February 2010 report from the White House Task Force on the Middle Class includes a paragraph that explains that the proposal would "significantly" reduce student loan payments, but offers an erroneous comparison to illustrate that claim. The report compares the \$228 monthly payments a borrow with \$20,000 in debt would pay under a 10-year amortizing plan with the \$115 monthly payment proposed under New IBR, when the appropriate comparison would be with the \$175 monthly payment already available to the same borrower in Old IBR at the time. In other words, the borrower would see her payments reduced by \$60 compared to then-current law, not the \$113 the report suggests. Furthermore, the borrower was already eligible to make a \$115 monthly payment under an existing repayment option called "graduated consolidation" without the proposed changed to IBR. See: Office of the Vice President of the United States, *Annual Report of the White House Task Force on the Middle Class*. 38: <http://www.whitehouse.gov/sites/default/files/microsites/100226-annual-report-middleclass.pdf>

<sup>8</sup> Delisle, J. & Holt, A. (2012). *Safety net or windfall: Examining changes to Income Based Repayment*. Washington, D.C.: New America Foundation.

<sup>9</sup> Undergraduates face relatively low limits in the federal loan program, thereby limiting the benefits of loan forgiveness 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. The aggregate limit is \$31,000. An independent undergraduate can borrow \$4,000 more in the first two years and \$5,000 more in later years with an aggregate limit of \$57,500. Note that borrowers can enter repayment with balances higher than the aggregate limit due to interest accrual. Additionally, a small share of undergraduate borrowers have federal Perkins Loans in addition to Stafford loans, which may be repaid through New

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IBR as a consolidation loan. Perkins Loans do not count toward the aggregate loan limit for Stafford loans. If eligible, certain students may therefore borrow \$5,500 annually through the program, in addition to the Stafford limit, with a separate aggregate limit of \$27,500. Borrowers with persistently low income make similar payments under both the Old and New IBR due to the exemption that is the same under both programs Both Old and New IBR calculate a borrower's payments on income after an exemption equal to 150 percent of the federal poverty guidelines, adjusted for household size. If a borrower's income is below that threshold, then his payment is \$0 regardless of which IBR he is using. Furthermore, borrowers with income slightly above the threshold make similar payments because 10 percent and 15 percent of the non-exempt income translates into only slightly different payments.

<sup>10</sup> Delisle, J. & Holt, A. *Safety net*.

<sup>11</sup> Consumer Financial Protection Bureau. (2013). *Public service & student debt. Analysis of existing benefits and options for public service organizations:*

[http://files.consumerfinance.gov/f/201308\\_cfpb\\_public-service-and-student-debt.pdf](http://files.consumerfinance.gov/f/201308_cfpb_public-service-and-student-debt.pdf)

<sup>12</sup> Students can finance their housing, food, transportation and other costs using federal loans. Those costs are determined by the school itself with little to no parameters set by the federal government. A review of a number of graduate school programs calculations suggest that the typical figure for such costs is \$13,000 per year, though some schools set the figure as high as \$25,000 per year.

<sup>13</sup> 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. The rationale for those brackets is the following. Fringe benefits and the student loan interest deduction, even though small on an absolute basis, can easily reduce a borrower's income by a large percentage. The 90 percent threshold is conservative. As borrowers earn more the threshold increases because these earners are more able to take advantage of fringe benefits, particularly pre-tax retirement contributions. At high incomes, the reduction is reduced because we assume these borrowers have unearned income that partially or fully offsets any pre-tax fringe benefits or other above-the-line deductions and credits.

<sup>14</sup> Borrowers would have to file a separate federal income tax return from their spouse to do this. While this may cause them to pay slightly more in income taxes, the reduced loan payments and increase in loan forgiveness far outweigh those costs.

<sup>15</sup> Under the IBR rules, borrowers may include a spouse in their household size calculation even if the couple files separate federal income tax returns. Children may be included in borrower's household size if the borrower provides for more than half of a child's care, regardless of which spouse claims the child as a dependent on his or her tax return.

<sup>16</sup> Interest rates on newly issued loans are based on the interest rates on 10-year Treasury notes plus a mark-up due to P.L. 113-28. Based on Congressional Budget Office estimates, interest rates on graduate Stafford loans and Grad PLUS loans will remain lower than rates in effect in recent years due to P.L. 113-28 only through 2015 after which they will remain above those rates.

<sup>17</sup> President Obama and several lawmakers favor making loan forgiveness at the 20-year mark tax exempt and it seems as if lawmakers will ultimately come under intense pressure to adopt this policy. Many borrowers who have large amounts of unpaid interest forgiven will be unable to afford their tax bills, particularly those for whom IBR was designed, borrowers with very low incomes.

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<sup>18</sup> Another problem with data on debt levels for graduates is that it is unclear whether the figures include both undergraduate and graduate school debt. The NPSAS data do, but other sources likely do not, and that distinction is important because a borrower's entire federal loan balance is included in the IBR plan. Similarly, it is unclear whether reported debt figures include the accrued interest on the loans while the borrower was enrolled in school. For graduate students that can be a significant amount, particularly if they have debt from undergraduate studies. Borrowers are not required to make interest payments on their loans while enrolled in school, though interest does accrue. While accrued interest does not compound while a borrower is in school, unpaid, accrued interest is added to a borrower's principal balance at repayment and is then repaid under New IBR.

<sup>19</sup> Consumer Financial Protection Bureau. *Public service*.

<sup>20</sup> Lewin, T. (2013, Sep 24) U.S. to contact borrowers with new options for repaying student loans. *New York Times*:

<http://www.nytimes.com/2013/09/25/education/us-to-contact-borrowers-with-new-options-for-repaying-student-loans.html?pagewanted=1&r=1&partner=rss&emc=rss>

<sup>21</sup> Georgetown removed this video from its website after we published a post on the Higher Ed Watch blog regarding the Georgetown Law loan repayment program. The referenced footage can still be viewed on the Ed Money Watch blog at Delisle, J. and Holt, A. (2013, Aug 8) Georgetown LRAP: In their own words. *Ed Money Watch*:

[http://edmoney.newamerica.net/blogposts/2013/georgetown\\_lrap\\_in\\_their\\_own\\_words-89258](http://edmoney.newamerica.net/blogposts/2013/georgetown_lrap_in_their_own_words-89258)