

# TAX CONSEQUENCES OF LOAN DISCHARGES FOR BORROWERS IN INCOME-DRIVEN REPAYMENT PLANS

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Income-driven repayment (IDR) plans help over 8 million federal student loan borrowers manage their debt and avoid default.<sup>1</sup> These plans, which base borrowers' monthly student loan payments on their income and family size, provide the assurance of more manageable monthly payments. Any remaining balance is forgiven after 20 or 25 years, providing a light at the end of the tunnel so that student loan payments do not last the rest of their lives. These plans provide relief when borrowers' incomes are low or drop, and increase payments when incomes rise.

Many borrowers in IDR will repay their loans in full, and many will pay more interest in IDR than under a 10-year standard repayment plan (because they will make lower monthly payments over a longer period of time). However, those who do receive a discharge of remaining debt after 20 or 25 years of responsible payments may face an unaffordable tax liability, because these discharged amounts are treated as taxable income under current law.

Regardless of the reason for discharge, forgiven student loan debt should never be treated as taxable income. Debt forgiven under IDR is not a windfall of income; borrowers may not have the cash resources to pay this tax. Student borrowers should not be hit with a tax bill after making responsible payments for so many years, particularly since the borrowers who end up receiving student loan forgiveness will be those with low incomes relative to their debt for a long period of time. It serves no policy goal for the government-as-lender to forgive debt so that a borrower may move on only to have the government-as-tax-collector immediately demand further payment.

Further, concern about the tax liability associated with IDR, which could run into many thousands of dollars, could discourage some borrowers from enrolling in the plans, including struggling borrowers who may be at risk of delinquency or default.<sup>2</sup> Over one million borrowers defaulted on their federal student loans from April 2019 to March 2020, even with the availability of protections such as IDR that could help make payments more manageable.<sup>3</sup>

Current law exempts from taxation federal student debt discharged for borrowers affected by school closures, for borrowers who become totally and permanently disabled and for borrowers pursuing public service careers. Yet we continue to tax the same loan forgiveness when it occurs for someone who has made 20 or 25 years of income-driven payments. Congress has a closing window of time to eliminate this inequitable tax treatment before most borrowers reach the light at the end of their repayment tunnel.

The table below and Examples 1-3 on the next page illustrate borrowers who will typically repay their loans in full in IDR, unless they make relatively low earnings. Typical bachelors' degree graduates will be able to pay their loans in full under all existing IDR plans if they make at least \$36,600 after college and sustain steady earnings growth over time.<sup>4</sup> Examples 4 and 5 show the significant potential tax consequences for borrowers with less steady income (small business owner) or sustained lower earnings (social worker) who have debt discharged under IDR. The examples compare the most recent income-driven plans to fixed-payment 10-year and 25-year repayment plans. We calculate estimates at more than one interest rate because borrowers enrolled in IDR plans attended school over a wide range of years and faced significant variation in interest rates (see discussion on page 8). For more details about the borrower scenarios and assumptions for Examples 1-5, see pages 8 and 9.

## Many Borrowers Will Repay Their Debt in Full in Income Driven Repayment Plans

Borrowers currently have five IDR plan options:<sup>5</sup>

- One early IDR plan (Income- Contingent Repayment, ICR) caps monthly loan payments at the lesser of 20 percent of discretionary income or 12-year repayment amount multiplied by the income percentage factor. This is by far the least common plan and excluded from our analysis.<sup>6</sup>
- One IDR plan (Original Income-Based Repayment, or Original IBR) caps monthly loan payments at 15 percent of discretionary income and discharges any remaining debt after 25 years of payments.
- Two other plans (Pay As You Earn, or PAYE, and 2014 IBR) cap monthly payments at 10 percent of discretionary income and discharge remaining balances after 20 years of payments.
- The newest IDR plan (Revised Pay As You Earn, or REPAYE), caps monthly payments at 10 percent of discretionary income and discharges remaining balances after 20 years of payments for borrowers with only undergraduate debt, and after 25 years for borrowers with any debt from graduate school.

Borrowers in income-driven repayment plans will repay *in full* (including all interest) if they:<sup>7</sup>

### Example with Higher Interest Rate (Loan Made Prior to Award Year 2013-14)

EXAMPLE DEGREE:	BORROWED IN FEDERAL STUDENT LOANS:	AND EARN AT LEAST:		
		ORIGINAL IBR (15%, 25 YEARS)	2014 IBR, PAYE (10%, 20 YEARS)	REPAYE (10%, 20 OR 25 YEARS)
Associate's	\$15,000	\$21,600	\$26,650	\$25,950
Bachelor's	\$30,000	\$27,100	\$36,600	\$36,150
Master's	\$45,000	\$32,700	\$46,650	\$40,200
Ph.D. or Professional	\$130,000	\$64,800	\$103,750	\$87,900

Borrowers in income-driven repayment plans will repay *in full* (including all interest) if they:<sup>12</sup>

### Example with Lower Interest Rate: Loan Made in Award Year 2020-21

EXAMPLE DEGREE:	BORROWED IN FEDERAL STUDENT LOANS:	AND EARN AT LEAST:		
		ORIGINAL IBR (15%, 25 YEARS)	2014 IBR, PAYE (10%, 20 YEARS)	REPAYE (10%, 20 OR 25 YEARS)
Associate's	\$15,000 <sup>13</sup>	\$18,900	\$22,750	\$22,650
Bachelor's	\$30,000 <sup>14</sup>	\$22,250	\$29,450	\$29,450
Master's	\$45,000 <sup>15</sup>	\$29,050	\$41,150	\$35,550
Ph.D. or Professional	\$130,000 <sup>16</sup>	\$54,750	\$88,400	\$74,200

The first three examples below illustrate borrowers who will not end up receiving any forgiveness in IDR but still benefit from income-driven payments that help them manage their loans as their family size and income change over time. Examples 4 and 5 illustrate how a borrower with sustained low income and a borrower with highly variable income over time may both receive some forgiveness at the end of their repayment period, but also immediately face a higher tax bill.

## Example 1: Middle-income family (married with one child)

This family repays in full (or nearly in full) under all IDR plans and pays more in total than under a 10-year standard plan, but their monthly payments are more manageable under IDR and they are protected against a bad job market after college, a rising concern for millions of students who have experienced the Great Recession in recent years, increasing natural disasters, and the COVID-19 pandemic.

- \$60,000 in combined federal undergraduate student loans<sup>17</sup>
- \$65,000 per year in combined income<sup>18</sup>
- Has a child in year 8 of repayment

### Example Borrower 1 with Higher Interest Rate: Loan Made Prior to Award Year 2013-14

	10-YEAR PLAN	25-YEAR PLAN	ORIGINAL IBR (15%, 25 YEARS)	2014 IBR, PAYE (10%, 20 YEARS)	REPAYE (10%, 20 OR 25 YEARS) <sup>19</sup>
Initial Monthly Payment	\$690	\$420	\$490	\$330	\$330
Highest Monthly Payment	\$690	\$420	\$690	\$690	\$740
Total Payments	\$82,850	\$124,950	\$91,050	\$118,600	\$119,350
Amount Discharged	n/a	n/a	\$0	\$2,550	\$1,500
Tax on Amount Discharged	n/a	n/a	\$0	\$200	\$100

### Example Borrower 1 with Lower Interest Rate: Loan Made in Award Year 2020-21

	10-YEAR PLAN	25-YEAR PLAN	ORIGINAL IBR (15%, 25 YEARS)	2014 IBR, PAYE (10%, 20 YEARS)	REPAYE (10%, 20 OR 25 YEARS) <sup>20</sup>
Initial Monthly Payment	\$570	\$280	\$490	\$330	\$330
Highest Monthly Payment	\$570	\$280	\$570	\$570	\$580
Total Payments	\$68,700	\$83,050	\$69,250	\$73,800	\$73,800
Amount Discharged	n/a	n/a	\$0	\$0	\$0
Tax on Amount Discharged	n/a	n/a	\$0	\$0	\$0

- After 12 years and 5 months in Original IBR:
  - They repay the entire loan principal **plus \$9,250 - \$31,050** in interest (no forgiveness)
- After 20 years in PAYE or 2014 IBR:
  - They repay the entire loan principal **plus \$13,800 - \$58,600** in interest (no forgiveness when applying lower interest rate for 2020-21 borrowers)
- After 20 years in REPAYE:
  - They pay the entire principle **plus \$13,800 - \$59,350** (no forgiveness when applying lower interest rate for 2020-21 borrowers)
- In all of the IDR plans, they **pay more in total** than under 10-year standard repayment

## Example 2: Pharmacists (married with one child)

This family also *repays in full* under all IDR plans and *pays more in total* than under a 10-year standard plan in two out of three plans,<sup>21</sup> but their monthly payments are more manageable under IDR. They *repay all principal and interest in less than 14 years* — well under the payment period of the plans.

- \$210,000 in combined federal loans, including debt from completing their pharmacy degrees (Pharm.D) in graduate school<sup>22</sup>
- \$225,000 per year in combined income<sup>23</sup>
- Has a child in year 4 of repayment

### Example Borrower 2 with Higher Interest Rate: Loan Made Prior to Award Year 2013-14

	10-Year Plan	25-Year Plan	Original IBR (15%, 25 Years)	2014 IBR, PAYE (10%, 20 Years)	REPAYE (10%, 20 or 25 years)
Initial Monthly Payment	\$2,420	\$1,460	\$2,420	\$1,660	\$1,660
Highest Monthly Payment	\$2,420	\$1,460	\$2,420	\$2,420	\$2,660
Total Payments	\$290,000	\$437,250	\$290,000	\$329,300	\$328,900
Amount Discharged	n/a	n/a	\$0	\$0	\$0

### Example Borrower 2 with Lower Interest Rate: Loan Made in Award Year 2020-21

	10-Year Plan	25-Year Plan	Original IBR (15%, 25 Years)	2014 IBR, PAYE (10%, 20 Years)	REPAYE (10%, 20 or 25 years)
Initial Monthly Payment	\$2,130	\$1,110	\$2,130	\$1,660	\$1,660
Highest Monthly Payment	\$2,130	\$1,110	\$2,130	\$2,130	\$2,450
Total Payments	\$255,150	\$332,550	\$255,150	\$263,900	\$263,400
Amount Discharged	n/a	n/a	\$0	\$0	\$0

- After 10 years in Original IBR:
  - They repay the entire loan principal *plus \$45,150 - \$80,000* in interest (no forgiveness)
- After 13 years and 4 months in PAYE or 2014 IBR:
  - They repay the entire loan principal *plus \$53,900 - \$119,300* in interest (no forgiveness)
- After 13 years and 1 month in REPAYE:
  - They repay the entire loan principal *plus \$53,400 - \$118,900* in interest (no forgiveness)
- In all of the IDR plans, they *pay at least as much in total* as under 10-year standard repayment

### Example 3: Civil Engineer (married with two children)

IDR helps keep this family's monthly payments manageable and they repay their in full loans with no forgiveness, although they will *pay more in total* than under a 10-year standard plan. They take almost the entire payment period (20 years) to repay their loans under PAYE and REPAYE.

- \$55,000 in combined federal loans, including debt from graduate school<sup>24</sup>
- Earns \$70,000 per year as a civil engineer<sup>25</sup>
- Spouse does not work
- Has children in years 2 and 3 of repayment

#### Example Borrower 3 with Higher Interest Rate: Loan Made Prior to Award Year 2013-14

	10-Year Plan	25-Year Plan	Original IBR (15%, 25 Years)	2014 IBR, PAYE (10%, 20 Years)	REPAYE (10%, 20 or 25 years)
Initial Monthly Payment	\$630	\$380	\$550	\$370	\$370
Highest Monthly Payment	\$630	\$380	\$630	\$630	\$740
Total Payments	\$75,950	\$114,500	\$83,700	\$109,500	\$109,150
Amount Discharged	n/a	n/a	\$0	\$0	\$0
Tax on Discharged Amount	n/a	n/a	\$0	\$0	\$0

#### Example Borrower 3 with Lower Interest Rate: Loan Made in Award Year 2020-21

	10-Year Plan	25-Year Plan	Original IBR (15%, 25 Years)	2014 IBR, PAYE (10%, 20 Years)	REPAYE (10%, 20 or 25 years)
Initial Monthly Payment	\$560	\$290	\$550	\$370	\$370
Highest Monthly Payment	\$560	\$290	\$560	\$560	\$610
Total Payments	\$66,800	\$87,100	\$68,250	\$76,050	\$76,000
Amount Discharged	n/a	n/a	\$0	\$0	\$0
Tax on Discharged Amount	n/a	n/a	\$0	\$0	\$0

- After 12 years and 6 months in Original IBR:
  - Repays entire loan principal *plus \$13,250 - \$28,700* in interest (no forgiveness)
- After 19 years and 8 months in PAYE or 2014 IBR:
  - Repays entire loan principal *plus \$21,050 - \$54,500* in interest (no forgiveness)
- After 19 years and 5 months in REPAYE:
  - Repays entire loan principal *plus \$21,000 - \$54,150* in interest (no forgiveness)

## BORROWERS WHO HAVE STUDENT LOANS WITH HIGHER INTEREST RATES FACE HIGHER TAX BILLS DUE TO DISCHARGED DEBT

The examples highlighted in this brief show that how much borrowers earn, how much student debt they took out, and their family's composition can all affect how much debt is forgiven in IDR after 20 or 25 years, as well as how higher interest rates can add up to more discharged loans and a bigger tax bill. More recent borrowers will benefit from declines in interest rates and will have less forgiveness on loans in IDR, while past borrowers with higher-interest loans will repay more overall but still will be more likely to receive some loan forgiveness due to accumulated interest and therefore may face a greater tax penalty.

- Example 4: Small business owner who borrowed prior to 2013 at 6.8 percent interest compared to current graduate student with 4.8 percent interest rate:
  - Has *over 6 times more debt forgiven* under REPAYE plan with \$34,250 discharged compared to \$5,450 for the same loan taken out by a current student
  - Additional tax burden from loan discharges under REPAYE plans increases to \$2,450 from \$350, tallying up to a roughly *7-fold increase in federal income taxes owed*
  - Discharges and additional tax burden under 2014 IBR or PAYE increase about two-thirds
  - Pays principal and interest in full under original IBR plan, regardless of interest rate
  - Pays loan entire principal under all IDR plans and pays nearly *double the amount of interest* under the original IBR plan (\$60,250 compared to \$30,600 for same loan with lower interest rate)
- Example 5: Social worker who borrowed prior to 2013 at 6.8 percent interest compared to a current undergraduate student with 2.75 percent interest rate:
  - *Amount of debt discharged almost triples* under the REPAYE plan and rises to \$31,600 from \$11,250 for same undergraduate with a loan at today's interest rate
  - Income tax burden from loan discharge under REPAYE is \$3,600 instead of \$900, *quadrupling the additional taxation* after forgiveness
  - Has more than a *quadruple increase in tax burden* from loan forgiveness under 2014 IBR or PAYE with additional federal income taxes increasing to \$4,900 from \$1,200
  - Taxation rises \$3,100 under original IBR plan, but the same loan borrowed at the lower interest rate would be paid in full (no forgiveness and increased taxation)
  - Pays entire loan principal under all IDR plans, but would pay *double the amount of interest* under the original IBR plan (\$33,450 compared \$14,000 for same loan with lower interest rate)

Sources: 4.8 percent is the assumed interest rate for graduate students in award year 2020-21.  
2.75 percent is the assumed interest rate for undergraduates in award year 2020-21.

#### Example 4: Small business owner (married with two children)

IDR helps keep this family's monthly payments manageable, particularly while building their business. However, taxing the amount discharged after 20 years of payments in PAYE or 2014 IBR *would more than quadruple the amount of taxes this family owes – adding \$2,600-\$4,150<sup>26</sup> to their federal income tax bill for that year.*

- \$45,000 in federal loans for graduate school<sup>27</sup>
- Years 1-3 of repayment: Earns \$0, while building a business
- Years 4-6: Earns \$45,000 per year
- Years 7-8: Gets married; earns combined income of \$75,000 per year (spouse earns \$30,000 per year)
- Years 9-10: Has first child, and spouse begins working part-time, earning \$20,000 per year; earns combined income of \$65,000, which starts to rise annually at 4 percent starting after year 9 of repayment
- Years 11+: Has a second child

#### Example Borrower 4 with Higher Interest Rate: Loan Made Prior to Award Year 2013-14

	10-Year Plan	25-Year Plan	Original IBR (15%, 25 Years)	2014 IBR, PAYE (10%, 20 Years)	REPAYE (10%, 20 or 25 years)
Initial Monthly Payment	\$520	\$310	\$0	\$0	\$0
Highest Monthly Payment	\$520	\$310	\$520	\$380	\$470
Total Payments	\$62,150	\$93,700	\$105,250	\$53,700	\$79,000
Amount Discharged	n/a	n/a	\$0	\$52,500	\$34,250
Tax on Discharged Amount (2019\$)	n/a	n/a	\$0	\$4,150	\$2,450
Initial Monthly Payment	n/a	n/a	\$0	593%	83%

#### Example Borrower 4 with Lower Interest Rate: Loan Made in Award Year 2020-21

	10-Year Plan	25-Year Plan	Original IBR (15%, 25 Years)	2014 IBR, PAYE (10%, 20 Years)	REPAYE (10%, 20 or 25 years)
Initial Monthly Payment	\$470	\$260	\$0	\$0	\$0
Highest Monthly Payment	\$470	\$260	\$470	\$380	\$470
Total Payments	\$56,750	\$77,350	\$75,600	\$53,700	\$79,000
Amount Discharged	n/a	n/a	\$0	\$32,450	\$5,450
Tax on Discharged Amount (2019\$)	n/a	n/a	\$0	\$2,600	\$350
Initial Monthly Payment	n/a	n/a	\$0	371%	12%

- After 24 years and 3 months in Original IBR:
  - Repays entire loan principal *plus \$30,600 - \$60,250* in interest (no forgiveness)
- After 20 years in PAYE or 2014 IBR:
  - Repays entire loan principal *plus \$8,700* in interest

- Owes \$2,600-\$4,150 in federal income tax on the amount discharged, more than **quadrupling the tax burden**
- After 25 years in REPAYE:
  - Repays entire loan principal **plus \$34,000** in interest
- Owes \$350 - \$2,450 in federal income tax on the amount discharged, increasing **tax burden over 80 percent** when applying the higher interest rate. In original IBR and REPAYE, **they pay more in total** than under 10-year standard repayment

### Example 5: Social worker (divorced with two children)

IDR helps keep this family's monthly payments manageable, particularly when the borrower is just starting out as a social worker. However, taxing the amount discharged after 20 years of payments in 2014 IBR or PAYE **can more than double the amount of taxes the family owes for the year, increasing their federal income taxes by \$1,200 – \$4,900**. Taxing the amount discharged after 25 years of payments in REPAYE **can more than double the family's tax burden with an increase of \$900 – \$4,900**.

- \$30,000 in federal undergraduate student loans<sup>28</sup>
- Earns \$30,000 per year as a contractor for a state agency (does not qualify for Public Service Loan Forgiveness)<sup>29</sup>
- Children are ages 8 and 10 when the borrower enters repayment

#### Example Borrower 5 with Higher Interest Rate: Loan Made Prior to Award Year 2013-14

	10-YEAR PLAN	25-YEAR PLAN	ORIGINAL IBR (15%, 25 YEARS)	2014 IBR, PAYE (10%, 20 YEARS)	REPAYE (10%, 20 OR 25 YEARS)
Initial Monthly Payments	\$350	\$210	\$0	\$0	\$0
Highest Monthly Payment	\$350	\$210	\$350	\$290	\$290
Total Payments	\$41,450	\$62,450	\$63,450	\$30,400	\$30,400
Amount Discharged	n/a	n/a	\$16,950	\$40,400	\$31,600
Tax on Discharged Amount (\$2019)	n/a	n/a	\$3,100	\$4,900	\$3,600
% increase in income tax	n/a	n/a	79%	144%	106%

#### Example Borrower 5 with Lower Interest Rate: Loan Made in Award Year 2020-21

	10-YEAR PLAN	25-YEAR PLAN	ORIGINAL IBR (15%, 25 YEARS)	2014 IBR, PAYE (10%, 20 YEARS)	REPAYE (10%, 20 OR 25 YEARS)
Initial Monthly Payments	\$290	\$140	\$0	\$0	\$0
Highest Monthly Payment	\$290	\$140	\$290	\$290	\$290
Total Payments	\$34,350	\$41,500	\$44,000	\$30,350	\$30,400
Amount Discharged	n/a	n/a	\$0	\$15,000	\$11,250
Tax on Discharged Amount (\$2019)	n/a	n/a	\$0	\$1,200	\$900
% increase in income tax	n/a	n/a	0%	35%	26%

- After 25 years in Original IBR:
  - Repays entire loan principal *plus \$14,000 - \$33,450* in interest
  - Owes as much as \$3,100 in federal income tax on the amount discharged, *increasing tax burden by 79 percent*
- After 20 years in PAYE or 2014 IBR:
  - Repays entire loan principal *plus \$350 - \$400* in interest
  - Owes as much as \$4,900 in federal income tax on the amount discharged, *more than doubling* the taxes they owe for the year
  - Federal income taxes increase as much as 12 percent as a share of income before forgiveness
- After 20 years in REPAYE:
  - Repays entire loan principal *plus \$400* in interest
  - Owes as much as \$3,600 in federal income tax on the amount discharged, *more than doubling* the taxes they owe for the year
  - Federal income taxes increase as much as 8.5 percent as a share of income before forgiveness
- Under all the IDR plans, monthly payments are much more manageable than under 10-year repayment
- If the social worker worked directly for the state agency, they could qualify for Public Service Loan Forgiveness (PSLF) after 10 years and their discharged loan amount would not be treated as taxable income

### **Details about Examples 1-5:**

- All incomes in the examples are Adjusted Gross Incomes (AGIs) and all figures are in current dollars.
- Monthly loan payments are rounded to the nearest \$10, and total payments and tax liability are rounded to the nearest \$50.
- Unless otherwise noted, calculations assume that the borrower lives in one of the 48 contiguous states, married borrowers file their taxes jointly, no tax credits were taken (except for the child credit when applicable at the time of loan forgiveness), and AGI increases by four percent per year.
- A range of calculations are made using higher and lower interest rate assumptions based on the fixed rate for loans made prior to award year 2013-14 (i.e., 6.8 percent) and rates for each corresponding loan type during award year 2020-21:<sup>30</sup>
  - Undergraduate-only examples apply interest rates of 2.75 percent and 6.8 percent.
  - Graduate-only examples apply interest rates of 4.8 percent and 6.8 percent.
  - Examples with combined undergraduate and graduate loans apply interest rates of 4.0 percent and 6.8 percent.
- Calculations are based on 2020 federal poverty levels and 2019 federal income tax brackets and rates, and assume that the poverty level increases annually at the rate of inflation.
- All loan repayment amounts are calculated by TICAS.
- Estimated taxes paid are calculated using the Internal Revenue Service, Tax Withholding Estimator, as of June 30, 2020. See <https://www.irs.gov/individuals/tax-withholding-estimator>.

## Endnotes

1. U.S. Department of Education. May 2020. Federal Student Aid Posts New Reports to FSA Data Center. For more information, see <https://ifap.ed.gov/electronic-announcements/052020FSAPostsNewReportstoFSADataCenter>.
2. The New York Times. 2012. For Student Borrowers, Relief Now May Mean a Big Tax Bill Later. <https://www.nytimes.com/2012/12/15/your-money/for-student-borrowers-a-tax-time-bomb.html>
3. U.S. Department of Education. May 2020. Federal Student Aid Posts New Reports to FSA Data Center. For more information, see <https://ifap.ed.gov/electronic-announcements/052020FSAPostsNewReportstoFSADataCenter>.
4. Bachelors' degree graduates typically earn about \$34,200 in their first year after college, based on TICAS analysis of College Scorecard data. This suggests forgiveness for most borrowers will be modest or nonexistent. Graduate professionals who typically earn solid middle-class incomes and take out much higher amounts of student debt may also receive some loan discharge, but they make considerable interest payments over 25 years before receiving any forgiveness.
5. This document focuses on the most recent IDR plans, IBR, PAYE, and REPAYE. For more information about the IDR plans and the Department of Education's online repayment estimator, visit <http://studentaid.gov/idr> and <http://ibrinfo.org>. For information on TICAS' proposal to streamline the multiple current IDR plans into one improved plan, see <http://bit.ly/2haTM3c>.
6. U.S. Department of Education, Federal Student Aid Data Center, National Student Loan Data System (NSLDS), as of March 31, 2020.
7. Incomes are Adjusted Gross Incomes (AGI) in current dollars, rounded to the nearest \$50. Calculations assume a single borrower without dependents, and that AGI increases 4 percent per year. The \$15,000 and \$30,000 debts are assumed to be from undergraduate study only (2.75 percent - 6.8 percent interest rate), while the \$45,000 and \$130,000 debts only include loans from graduate school (4.8 percent - 6.8 percent interest rate).
8. The average debt of associates' recipients who borrowed to attend a public college was \$15,100 based on TICAS analysis of the U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2015-16.
9. The average debt of 2018 bachelors' recipients who borrowed to attend public and private nonprofit colleges was \$29,650. For more information, see TICAS. 2019. Student Debt and the Class of 2018. <https://ticas.org/wp-content/uploads/2019/09/classof2018.pdf>.
10. The average debt of masters' recipients was \$43,300 based on TICAS analysis of the U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2015-16.
11. The average debt of doctoral degree recipients was \$129,450 based on TICAS analysis of the U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2015-16.
12. Incomes are Adjusted Gross Incomes (AGI) in current dollars, rounded to the nearest \$50. Calculations assume a single borrower without dependents, and that AGI increases 4 percent per year. The \$15,000 and \$30,000 debts are assumed to be from undergraduate study only (2.75 percent - 6.8 percent interest rate), while the \$45,000 and \$130,000 debts only include loans from graduate school (4.8 percent - 6.8 percent interest rate).
13. The average debt of associates' recipients who borrowed to attend a public college was \$15,100 based on TICAS analysis of the U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2015-16.
14. The average debt of 2018 bachelors' recipients who borrowed to attend public and private nonprofit colleges was \$29,650. For more information, see TICAS. 2019. Student Debt and the Class of 2018. <https://ticas.org/wp-content/uploads/2019/09/classof2018.pdf>.
15. The average debt of masters' recipients was \$43,300 based on TICAS analysis of the U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2015-16.
16. The average debt of doctoral degree recipients was \$129,450 based on TICAS analysis of the U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2015-16.
17. Assumes both spouses take out roughly the average amount of debt for bachelors' degree graduates at public and private nonprofit colleges.
18. The typical income of bachelors' graduates in the first year after attending a public university is roughly \$33,600, based on TICAS analysis of program-level College Scorecard data.
19. The REPAYE plan discharges remaining balances after 20 years of payments for borrowers with only undergraduate debt, and after 25 years for borrowers with any debt from graduate school.
20. The REPAYE plan discharges remaining balances after 20 years of payments for borrowers with only undergraduate debt, and after 25 years for borrowers with any debt from graduate school.
21. The only exception is the Original IBR plan because borrowers would in that case make exactly the same monthly payments as they would under the 10-year plan.
22. The average Pharm.D. school graduate in 2016 who borrowed had \$104,800 in federal debt from undergraduate and graduate studies, based on TICAS analysis of data from the U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2015-16.
23. The typical income of Pharm.D. graduates in the first year after school is roughly \$112,600, based on TICAS analysis of program-level College Scorecard data.
24. The average Master of Science graduate in 2016 who borrowed had \$53,850 in federal debt from undergraduate and graduate studies, based on TICAS analysis of data from the U.S. Department of Education, National Postsecondary Student Aid Study (NPSAS), 2015-16.
25. The typical income for civil engineering (masters' level) graduates in the first year after school is roughly \$67,800, based on TICAS analysis of program-level College Scorecard data.

26. Note these figures are converted back into 2019 dollars.
27. Example assumes borrower takes out roughly the average amount of debt for masters' degree graduates.
28. Assumes social worker takes out roughly the average amount of debt for bachelors' degree graduates at public and private non-profit colleges.
29. The typical income for bachelors' graduates trained in social work in the first year after school is roughly \$30,900, based on TICAS analysis of program-level College Scorecard data.
30. We used interest rates listed on U.S. Department of Education, Federal Student Aid, as of June 30, 2020. See <https://studentaid.gov/understand-aid/types/loans/interest-rates>.