

ECONOMIC AND REVENUE IMPACT OF STUDENT LOAN MORATORIUM

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OCTOBER 2023

Good Afternoon

I Student Loan Repayment Moratorium: background and big picture

II Looking Back: 2020-2023

- Did any borrowers continue to pay? | who was impacted?
- Size of repayment pause | economic and revenue impact (IMPLAN)
- Supporting data and research | caveats and technical issues

III Looking Forward: 2024

- New SAVE income driven repayment (IDR) plan | lots of uncertainty
- Economic and revenue impact (IMPLAN)

Disclaimer: not an endorsement/critique of any modeling software!

I. Student Loan Repayment Moratorium

March 2020 moratorium (no payments, no interest accrues)

- Most federally-held student loans | no private loans
- Extended 2x (Trump) and 6x (Biden)
- Interest accrues Sept 2023 | payments start Oct 2023 | but “on ramp”

Impact on PA borrowers (Dec 2022, federal loans)

- **1.86 million** borrowers | \$67 billion total debt
- Average balance: \$35,400 | Median balance: \$20,100
- Average repayment? **\$300/month** | \$3,600/annual
- **~\$7.0 billion/annual** absolute max | likely closer to **\$2.5 billion**

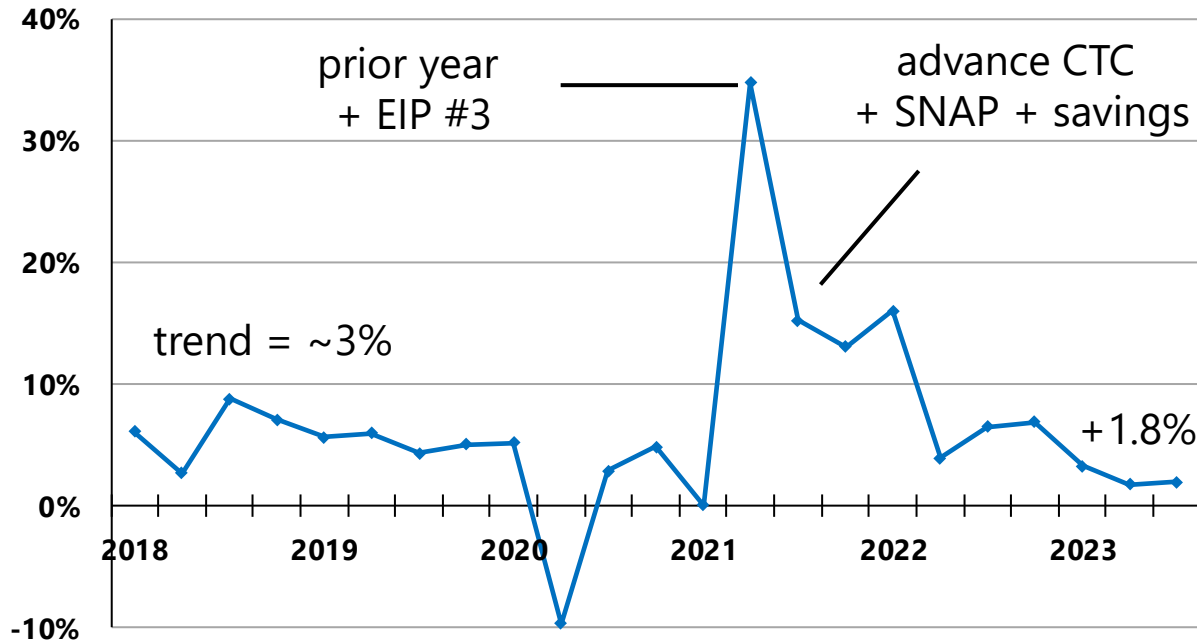
Simple Example

2018 graduated borrower on fixed 10 yr payment plan (no IDR)

- \$30,000 debt | 4.45% interest rate | has paid 2 years, then pandemic hits
- Short-term benefit: no payments!
- Long-term benefit: forgiven interest, gain 3.5 years on forgiveness window, extra inflation erosion due to unusually high inflation (?)

<u>year</u>	<u>months</u>	<u>principal</u>	<u>interest</u>	<u>payment</u>	
2020	9	\$1,942	\$849	\$2,792	
2021	12	\$2,693	\$1,030	\$3,722	—————
2022	12	\$2,815	\$907	\$3,722	
2023	<u>9</u>	<u>\$2,195</u>	<u>\$597</u>	<u>\$2,792</u>	
total	42	\$9,645	\$3,383	\$13,028	look at a full year "typical" impact

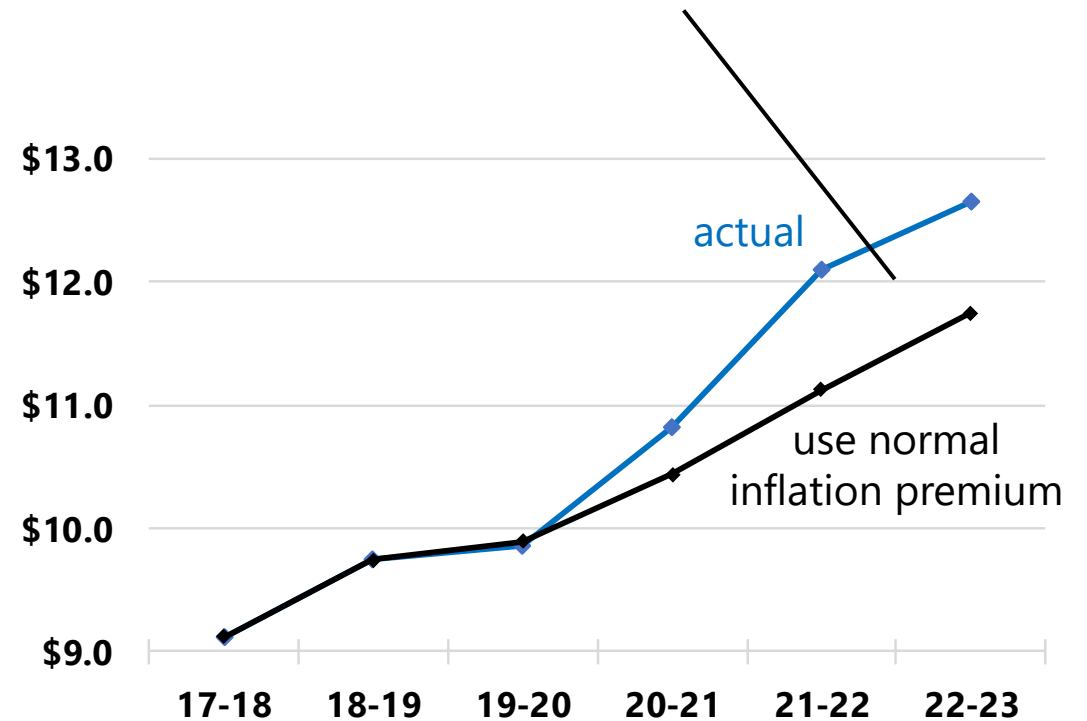
Direct Impact: PA Sales Tax Revenues (exclude autos)



Avg Growth: 18-19 to 22-23

sales tax	6.5%
core CPI	<u>3.8%</u>
premium	+2.7%
<i>typical</i>	<i>+1.0%</i>

FY 22-23 \$12.7 billion
 +\$0.9 billion "premium"
 but not just moratorium impact



II. Three Critical Parameters for Analysis

1 Share of federal student loan **debt held by paying borrowers**

- 55% of dollar amount | 46% of borrowers (2019)
- Others in default, deferment, forbearance, delinquent, in-school (next two slides)

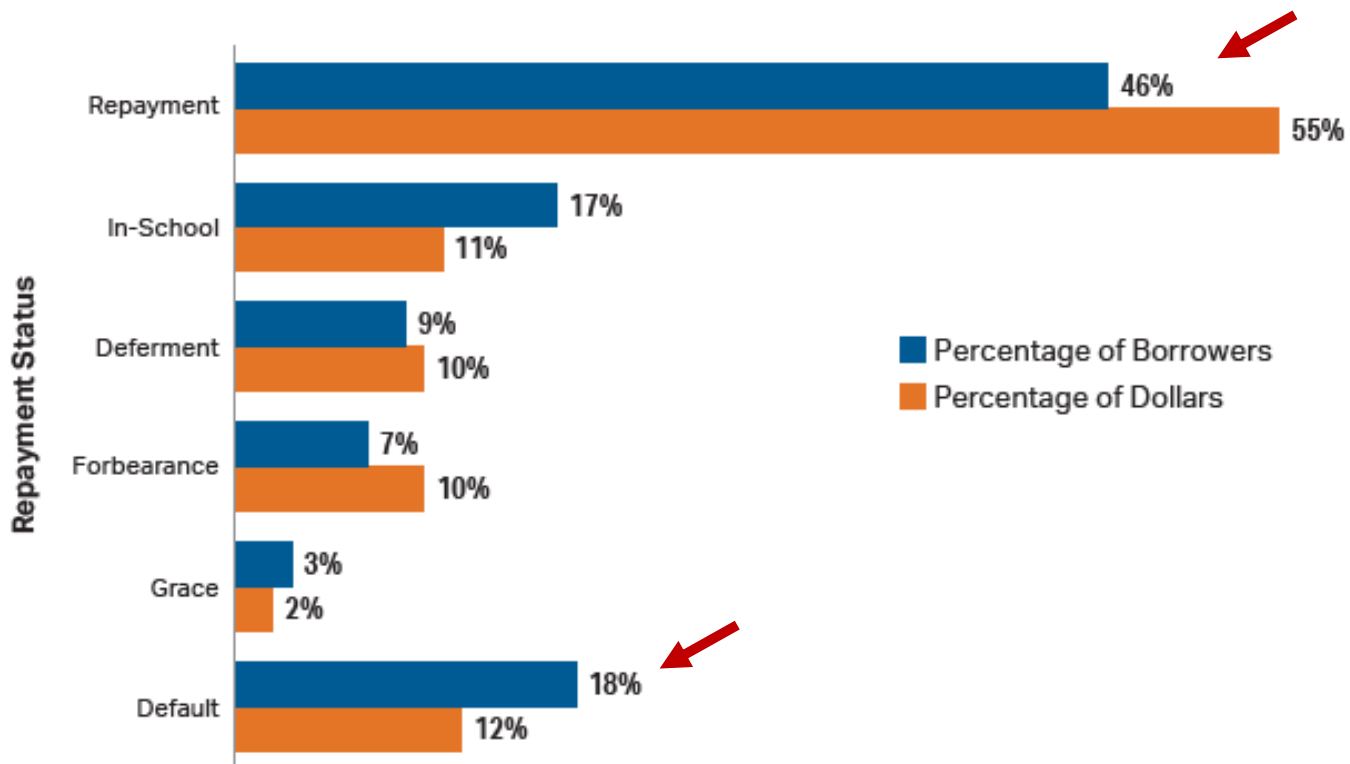
2 Size of **average monthly payment (for those paying)**

- NYFRB (2019) \$200 to \$299 (“typical”) | NYFRB (2022) ~\$350 (unofficial)
- Katz (2023) \$328 | Looney (2019) \$316
- Transunion (2023) \$336 non-mortgage, \$400 mortgage (estimates for 2024)

3 Share of **borrowers that continued to pay off loans**

- NYFRB (2022): 19% of borrowers continued to reduce balances (41% pre-Covid)
- Katz (2023): 44% of new forbearance liquidity used to pay student loans (2020)
- IRS: student loan interest deduction falls ~50% from 2019 to 2021 (prelim)
- Dept of Ed remittances to US Treasury: fall 60% (2020) to 85% (2023)

Repayment Status of Debt: Dollars and Borrowers (2019)



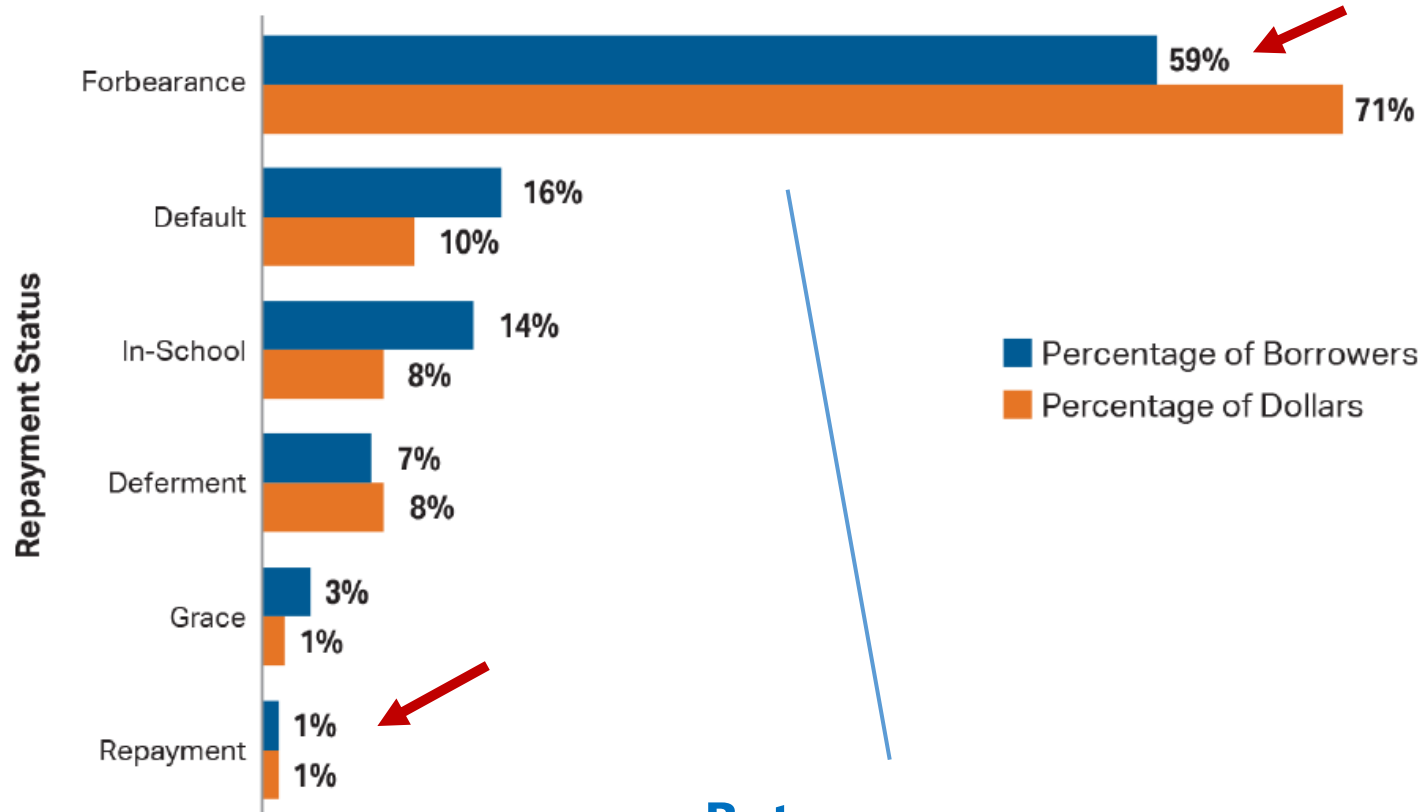
Average Federal Loan Balance, Number of Borrowers, and Total Balance by Repayment Status, Second Quarter 2019

	Average Balance	Number of Borrowers (in Millions)	Total Balance (in Billions)
Repayment	\$36,500	19.4	\$708.5
In-School	\$19,700	7.0	\$138.2
Deferment	\$35,800	3.7	\$132.4
Forbearance	\$45,000	2.8	\$126.0
Grace	\$18,500	1.3	\$24.0
Default	\$19,800	7.5	\$148.3
Other	\$48,000	0.2	\$9.6
Total	\$30,700	41.9	\$1,287.0

NOTES: Includes both loans made under the Federal Direct and Federal Family Education Loan (FFEL) programs and held by the Department of Education. Excludes the \$183 billion in outstanding FFEL loans not held by the federal government. The second quarter of FY2019 ended on March 31, 2019.

Source: College Board, Trends in Student Aid.

Repayment Status of Debt: Dollars and Borrowers (2022)



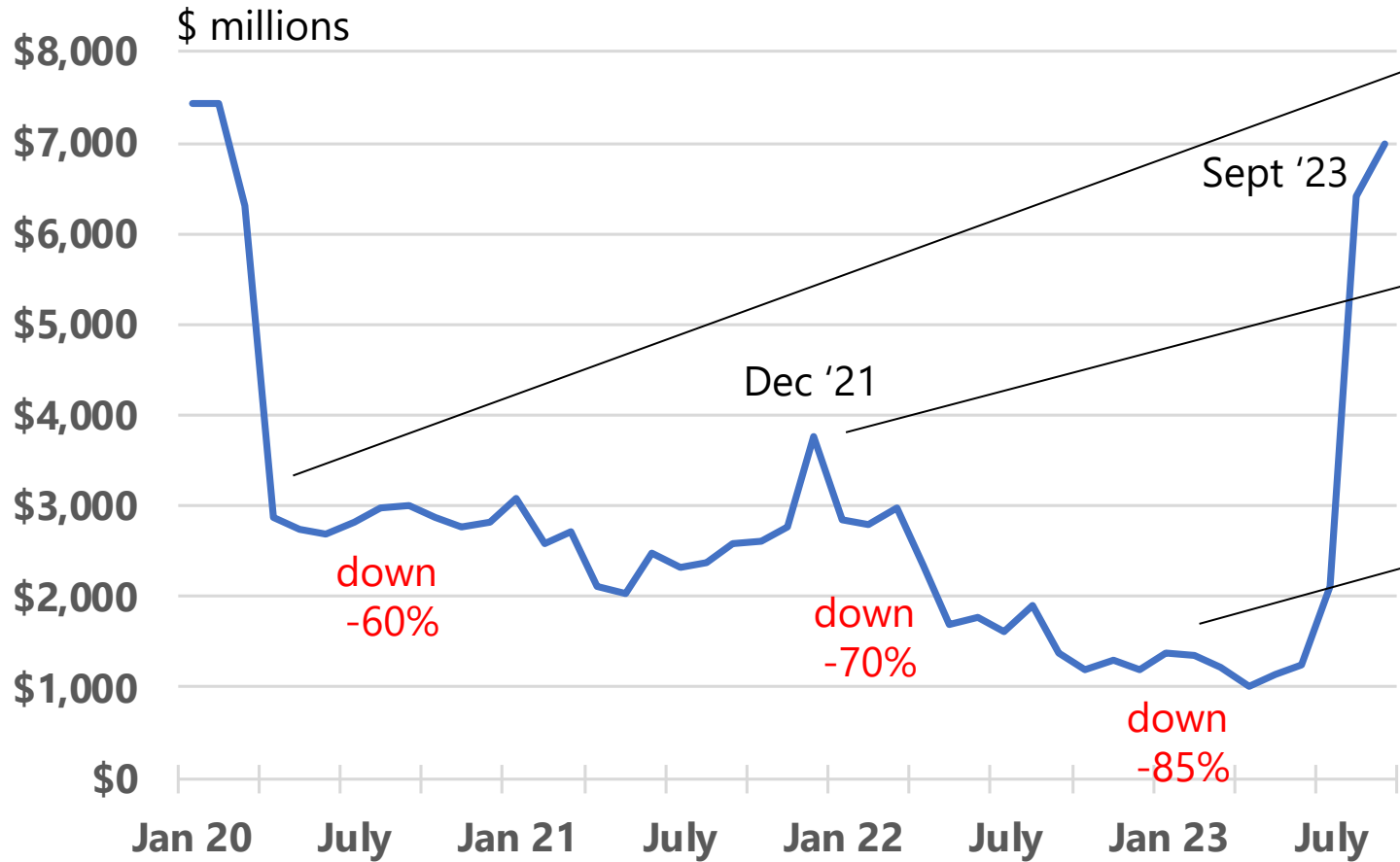
But some were still paying

Average Federal Loan Balance, Number of Borrowers, and Total Balance by Repayment Status, Second Quarter 2022

	Total Balance (in Billions)	Number of Borrowers (in Millions)	Average Balance
Forbearance	\$1,050.4	25.5	\$41,200
Default	\$146.8	6.8	\$21,600
In-School	\$117.3	6.0	\$19,600
Deferment	\$117.1	3.1	\$37,800
Grace	\$21.4	1.2	\$17,800
Repayment	\$15.6	0.5	\$31,200
Other	\$8.0	0.2	\$40,000
Total	\$1,476.6	43.3	\$34,100

Source: College Board, Trends in College Pricing and Student Aid.

Monthly Remittances: Dept of Education to US Treasury



Original Moratorium
Mar 20: to Sep 20

4th Extension
First "Final Time"
Aug 21: to Jan 22

7th Extension
Second "Final Time"
Aug 22: to Dec 22

8th Extension
Nov 22: to Sept 23
(Supreme Court)

Source: Monthly Treasury Statement

October 3, 2023



Those Who Paused: Did They Spend or Save?

Generally spent... and some used to leverage more borrowing

- We find a **large stimulus effect**, as **borrowers substitute increased private debt for paused public debt**.... (b)orrowers used the new liquidity to increase borrowing on credit cards, mortgages, and auto loans rather than avoid delinquencies. (Dinerstein et al., 2023)

Those borrowers may now be worse off

- **Distressed borrowers** whose loans were paused had **12.3% more credit card debt** than those whose loans weren't paused, and auto loans rose 4.6%. (Chava et al., 2023)
- **...distressed borrowers** in forbearance have also **begun to fall behind on their nonstudent debt at a rate that is 14% higher** than the control group. (Chava et al., 2023)

Modeling the Impact of the Moratorium for IMPLAN

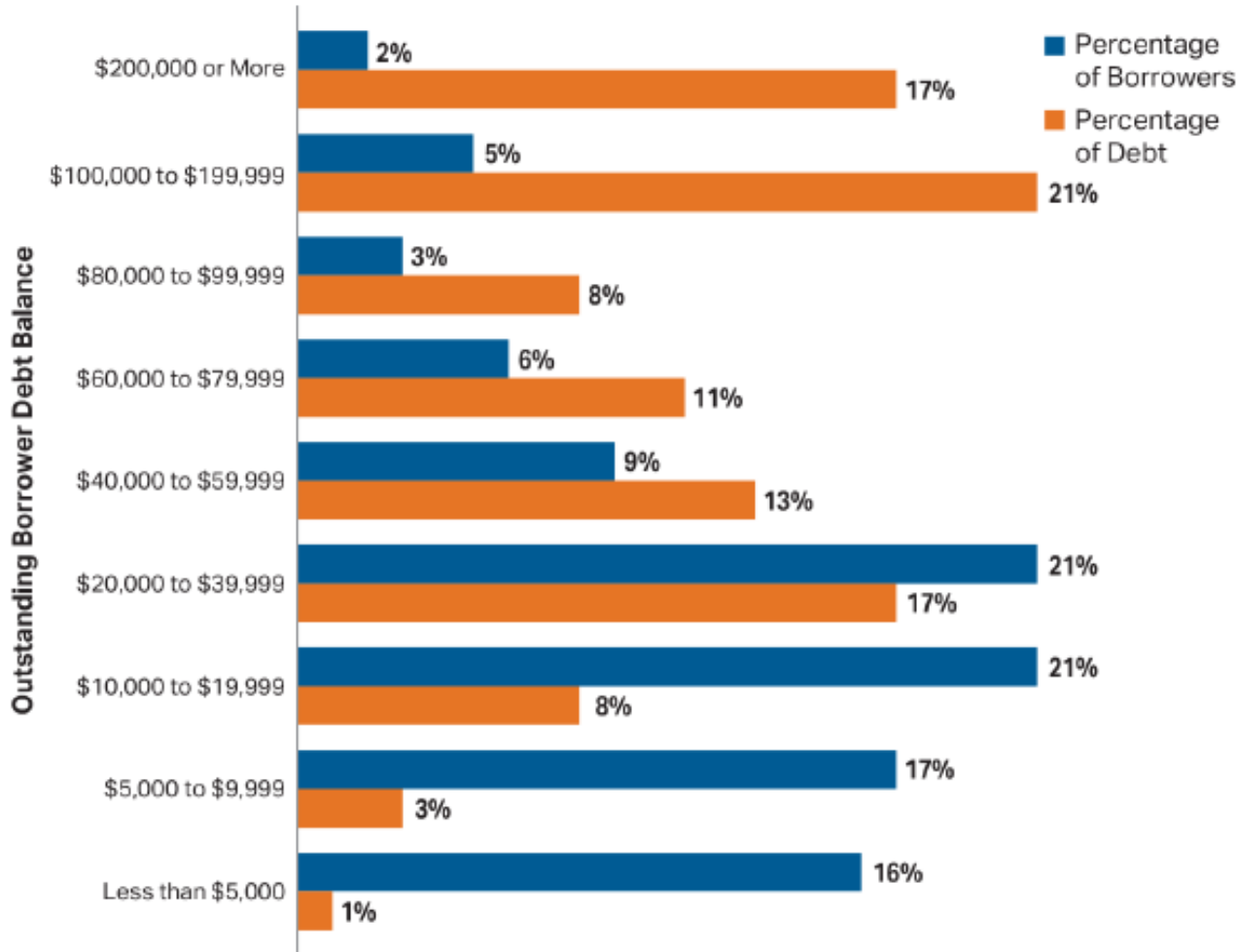
\$300 avg monthly payment for payors
 1,860 total federal borrowers (000)
 46% % borrowers in repayment
 80% % that paused
 \$205 monthly impact (\$ millions)
\$2,464 annual impact (\$ millions)

4 key parameters

did not use >\$200 group

	Income Group (\$ 000s)				Total	
	30-50	50-100	100-150	150-200		
Distribution	15%	25%	30%	30%	100%	
Retained Funds	\$370	\$616	\$739	\$739	\$2,464	
Added Leverage	125%	110%	100%	100%		
Adjusted Amount	\$462	\$678	\$739	\$739	\$2,618	
Add Back Income Tax	\$462	\$737	\$850	\$880	\$2,928	IMPLAN deducts all income taxes, need to neutralize

Highly Concentrated: Distribution of Student Loan Debt 2022



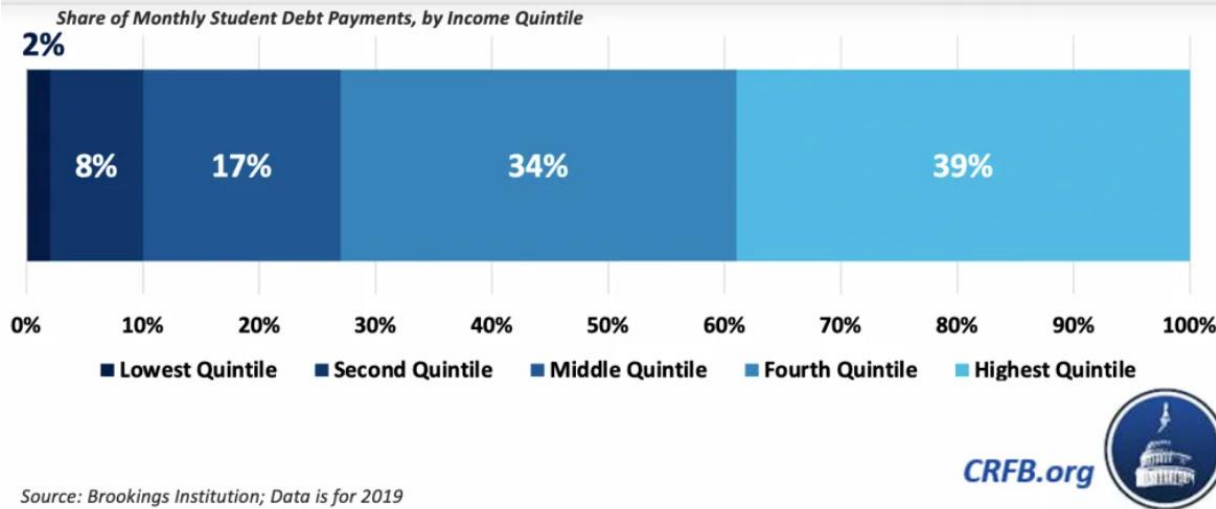
Federal Loan Balance by Debt Size, Second Quarter of FY2022

	Total Balance (in Billions)	Number of Borrowers (in Millions)	Average Balance
\$200,000 or More	\$281.9	1.0	\$281,900
\$100,000 to \$199,999	\$333.3	2.4	\$138,900
\$80,000 to \$99,999	\$126.6	1.4	\$90,400
\$60,000 to \$79,999	\$181.1	2.6	\$69,700
\$40,000 to \$59,999	\$211.8	4.3	\$49,300
\$20,000 to \$39,999	\$277.8	9.7	\$28,600
\$10,000 to \$19,999	\$135.5	9.3	\$14,600
\$5,000 to \$9,999	\$54.4	7.5	\$7,300
Less than \$5,000	\$18.9	7.1	\$2,700
Total	\$1,621.3	45.3	\$35,800

Source: College Board, Trends in College Pricing and Student Aid.

High Income Borrowers Make Great Majority of Payments

Most Student Loan Payments Come From High Earners

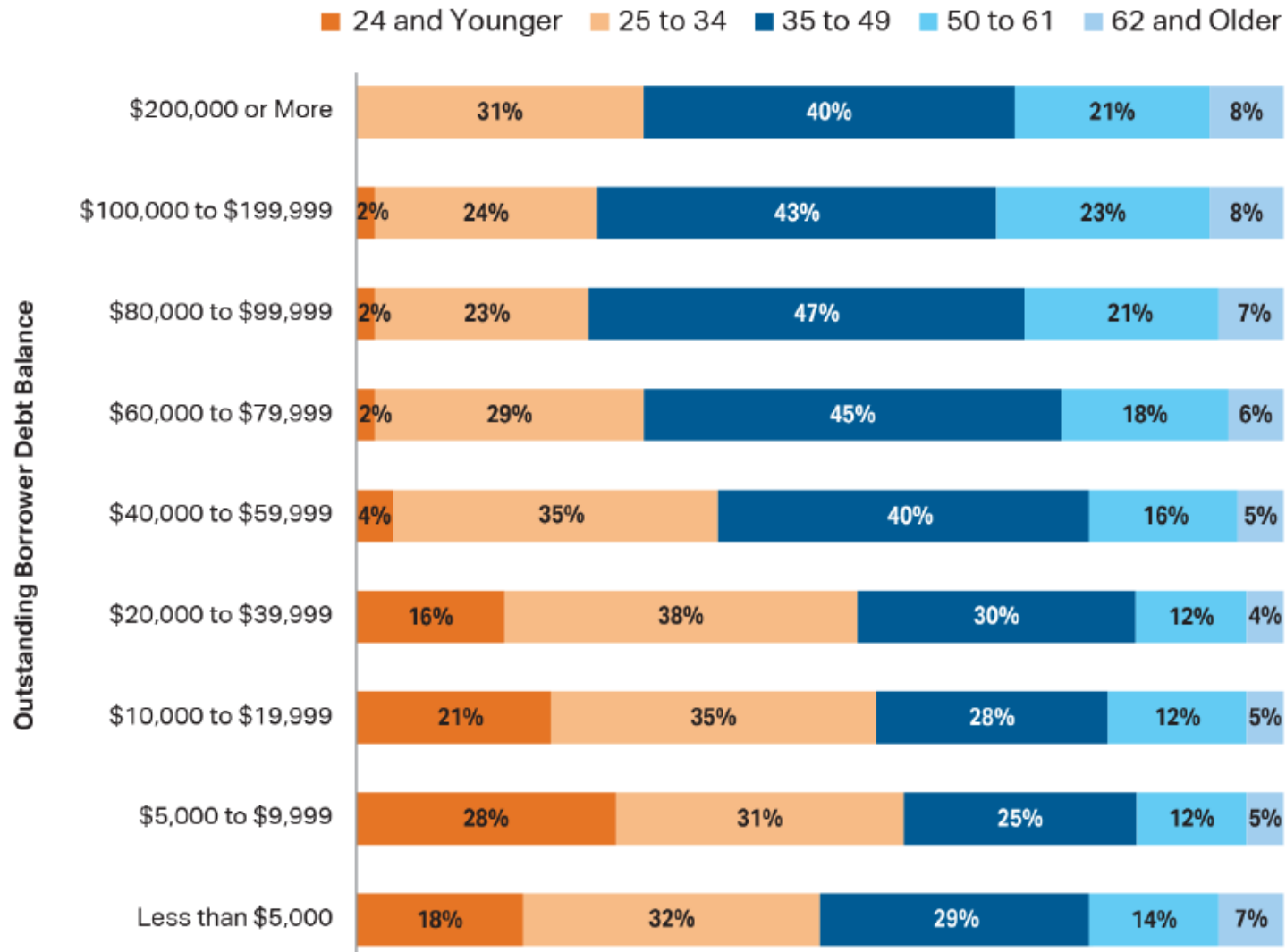


Brookings (2019)
Survey of Current Finances (2016)
73% payments from top 40%
2% payments from bottom 20%

earnings decile	median earnings	share payments	share balances
1	\$12,217	1.1%	3.1%
2	\$25,453	3.9%	4.1%
3	\$36,652	4.3%	8.8%
4	\$46,833	8.3%	11.2%
5	\$59,458	12.0%	11.7%
6	\$74,323	10.2%	13.7%
7	\$93,667	15.8%	13.6%
8	\$120,138	16.2%	14.2%
9	\$162,899	18.2%	13.5%
10	\$529,421	9.9%	6.1%
Total		100.0%	100.0%

Briones, Powell and Turner (Jan 2023)
Survey of Current Finances (2019)
60% payments from top 40%
7% payments from bottom 20%

Distribution of Student Loan Debt 2022



Age 35 to 49

Age 50 to 61

Source: College Board, Trends in College Pricing and Student Aid.

Notes on IMPLAN Modeling

Modeled as a “Household Income Event”

- Examples: stimulus checks, tax refunds, change in sales tax rate
- **Low multipliers:** a gov't transfer (not a purchase), flows to upper income
- No direct or indirect effects, only “induced” effects

Used 2019 data year, not 2020 or 2021 (latest available)

- Both years include special recovery programs embedded in BEA data
- Economic interactions could be quite different

IMPLAN reduces inputs for income tax and savings

- Taxes must be neutralized | payments made from after-tax income
- Savings rate 0% for lower income groups | 10-20% for upper groups

PA Economic and Revenue Impacts (Annual)

Economic Impact

Employment	19,860 jobs	FT + PT, and self-employed ~6.1 million payroll workers
Labor Income	\$1.14 billion	wages, benefits, payroll taxes, self-employment income
Value Added or GDP	\$1.94 billion	
Final Output or Sales	\$3.29 billion	+0.24% growth

State Revenue Impact

Sales Tax	\$68 million	6% rate, includes LOTS of stuff general sales tax ~50%
Personal Income Tax	\$19 million	flat 3.07% rate
Corporate Income Tax	\$8 million	likely closer to \$30 million

Technical Notes and Caveats

Factors that (could) **overstate** impact

- Impacts muted during COVID? | supply chains, tight labor market, other stimulus programs
- Sales tax includes tobacco, gross receipts, insurance premiums, gaming....

Factors that **clearly understate** impact (could be large!)

- Includes leakages or outflows | but all other states impacted too
- Average vs marginal spending: more likely to spend new monies on taxable items (e.g., dining out, electronics?)
- IMPLAN tax allocation (uses same general splits for all industries): for this proposal, property taxes overstated, general sales tax understated

III. Repayments: New IDR Program (SAVE) Complicates Analysis

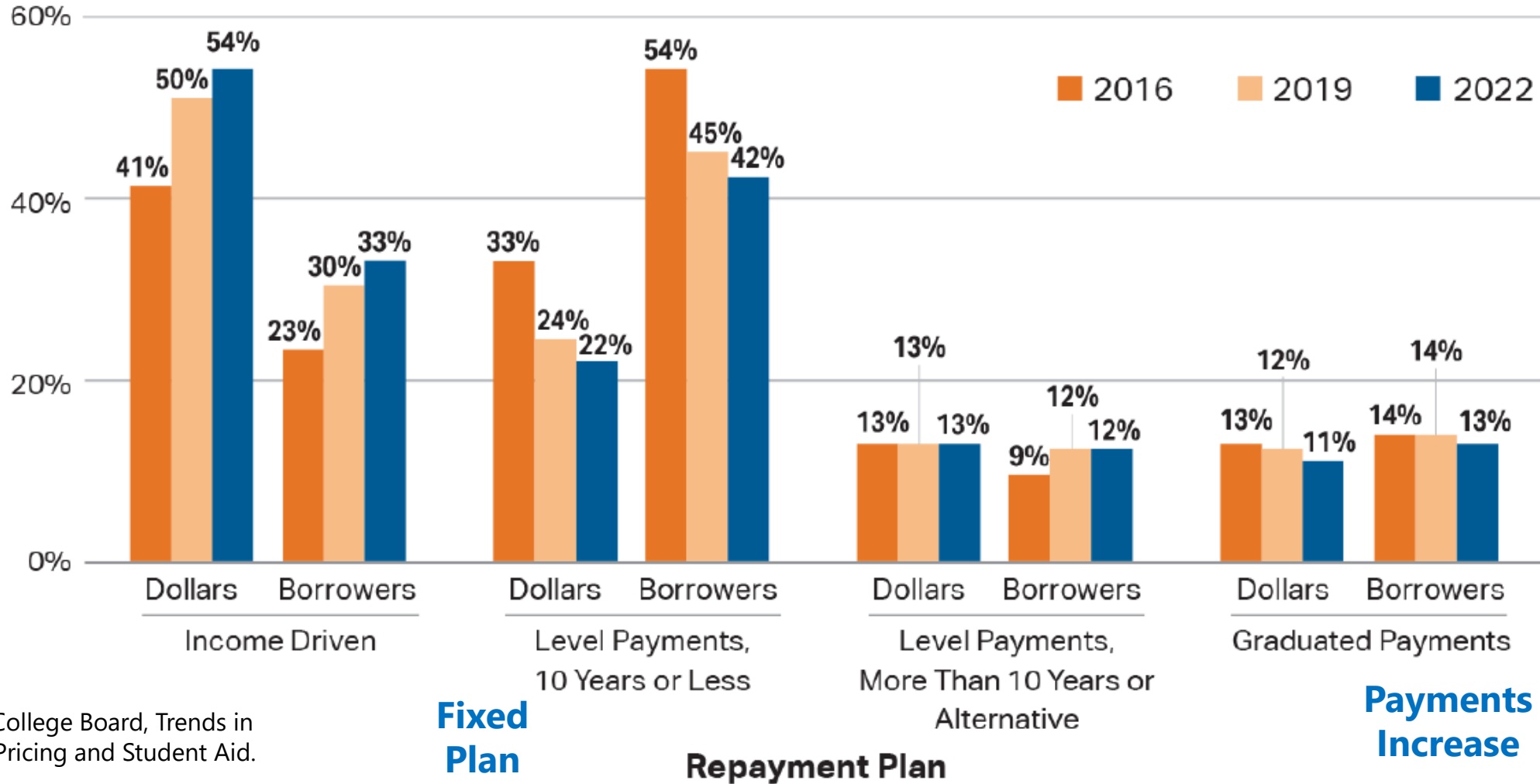
SAVE makes 4 major changes (not effective until July 2024)

- Monthly payment reduced: 10% to 5% of disposable income (undergrad only)
- No payment disposable income limit: 150% to 225% of FPL (all debt)
- Balance forgiven after 10 yrs of payments (undergrad) with less than \$12,000 in debt (previously 20 yrs) | 20 or 25 yrs for others
- Unpaid interest forgiven (no negative amortization)

Reduces cost of student loan debt | incentivizes more borrowing

- Single < \$32,800 makes no payments (indexed)
- Family of 4 < \$67,500 makes no payments
- CBO (2023): graduate debt +10%, undergrad debt +15%

Distribution of Federal Direct Loan Dollars and Borrowers by Plan



Source: College Board, Trends in College Pricing and Student Aid.

Modeling Repayments for IMPLAN

-\$250	avg monthly payment for payors	_____	slightly lower
2,000	total federal borrowers (000)		new IDR more generous
40%	% borrowers in repayment		higher "no pay" thresholds
--	% that paused		fewer but larger payors
-\$200	monthly impact (\$ millions)		allow inflation
-\$2,400	annual impact (\$ millions)		

	Income Group (\$ 000s)				Total	
	30-50	50-100	100-150	150-200		
Distribution	10%	20%	35%	35%	100%	more to high end
Repayment	-\$240	-\$480	-\$840	-\$840	-\$2,400	
Reduce Savings	<u>0%</u>	<u>0%</u>	<u>-10%</u>	<u>-15%</u>		extra vs IMPLAN
Adjusted Repayment	-\$240	-\$480	-\$756	-\$714	-\$2,190	
Add Back Income Tax	-\$240	-\$522	-\$869	-\$850	-\$2,481	

PA Economic and Revenue Impacts (Annual)

Economic Impact

Employment	-16,350 jobs
Labor Income	-\$0.94 billion
Value Added (GDP)	-\$1.60 billion
Final Output or Sales	-\$2.71 billion

same notes as
moratorium impact

**a net gain to states
a loss for feds**

State Revenue Impact

Sales Tax	-\$56 million
Personal Income Tax	-\$16 million
Corporate Income Tax	-\$7 million

same notes as
moratorium impact

Concluding Thoughts...

Student loan moratorium had a moderate economic impact

- Poorly targeted: more than half of benefit to households with income >\$100k
- Many low-income borrowers already in default or deferment status
- Low economic multipliers (induced effects only)

Start of repayments a moderate/modest economic headwind

- Repayments clearly started in Sept | PA sales tax flat in Sept (YOY growth)
- SAVE program will significantly reduce monthly payments for many

Longer-term impacts unclear

- Borrowing increases as college debt subsidized further
- Impact on labor force participation rates?
- Distressed borrowers in worse shape than prior to pandemic?