

# The Graduate Student Loan Borrowing Landscape

**Graduate student loan debt makes up about half of all federal loan debt.<sup>1</sup>**

Graduate borrowing has increased over the past few decades, reflecting the growing attainment of graduate degrees and higher loan amounts per borrower.<sup>2</sup> Increases in graduate borrowing have coincided with three significant policy changes in the federal student loan landscape: 1) the introduction of the Graduate PLUS loan program, 2) the expansion of income-driven repayment (IDR) programs,

and 3) the creation of Public Service Loan Forgiveness (PSLF).<sup>3</sup> Some researchers have pointed to these programs as contributing to the growing share of graduate debt, but evidence remains limited, and findings are mixed.<sup>4</sup> Recent research found that students previously restricted by federal loan limits borrowed \$3,596 more in cumulative student loan debt on average after Grad PLUS was introduced.<sup>5</sup> According to calculations using the most recent National Postsecondary Student Aid Study (NPSAS), the median debt for graduate program completers who borrowed doubled after the introduction of Grad PLUS, increasing from \$35,000 in 2004 to over \$70,000 in 2020.<sup>6</sup> However, while about 48 percent of graduate students who completed a graduate degree in 2019-20 borrowed federal student loans, only about 16 percent borrowed Grad PLUS loans specifically.<sup>7</sup>

In early 2023, the Congressional Budget Office estimated that the Biden administration's IDR plan (SAVE) would increase graduate borrowing by 10 percent by 2027,<sup>8</sup> and the data reflect a correlation between IDR enrollment and higher loan balances.<sup>9</sup> But it remains unclear whether borrowers consciously consider future savings from IDR or PSLF when deciding how much debt to incur for graduate school—or whether they are even able to accurately estimate potential savings.<sup>10</sup>

**This is the first in a series on graduate student loan borrowing that can inform multifaceted, equitable policy solutions.**

Further work will investigate differences in earnings and return on investment, data limitations and concerns, and the potential equity implications of borrowing limits. This first installment examines data from the College Scorecard to understand the current landscape of federal student loan borrowing for graduate education. We present the weighted average federal student loan debt over time, by sector and level, and for the highest and lowest debt fields. Average debt data are missing for a substantial number of graduate programs, often due to privacy suppression. While the programs included in our analysis may represent the majority of graduate *students*, our results represent less than one-quarter of all graduate *programs* and should be interpreted with caution.

Figure 1 shows average federal student loan debt for graduate programs by level for five two-year pooled cohorts. Average debt for master's degree earners increased by about \$1,300 (3%) from the earliest pooled cohort to the most recent pooled cohort. Average debt for doctoral degree earners

<sup>1</sup> Further details on [methodology](#) can be found at the end of the brief.

increased by about \$10,400 and for professional degree earners by about \$15,500. This represents a 13 percent increase for doctoral degrees and an 11 percent increase for professional degrees.

**Figure 1.** Average Federal Student Loan Debt among Graduate Students by Level  
2-year Pooled Cohorts 2014-15 Through 2019-20

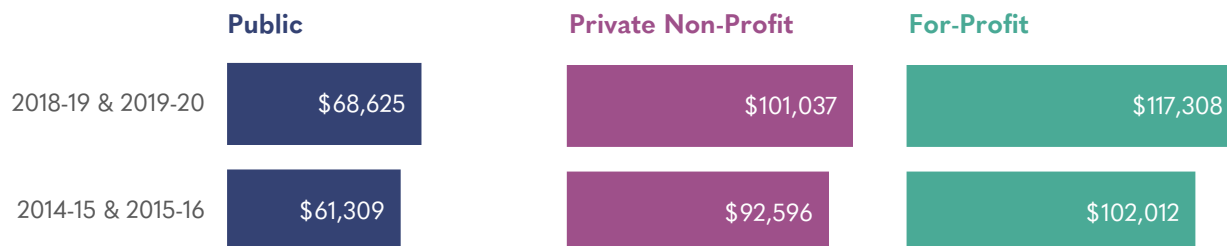
	Master's Degree	Doctoral Degree	Professional Degree
2018-19 & 2019-20	\$46,057	\$92,926	\$153,335
2017-18 & 2018-19	\$45,792	\$90,039	\$158,969
2016-17 & 2017-18	\$45,224	\$83,067	\$154,476
2015-16 & 2016-17	\$44,781	\$81,973	\$141,916
2014-15 & 2015-16	\$44,752	\$82,533	\$137,828

Figure 2 presents average master's degree debt by sector for the earliest and most recent pooled cohorts. Average debt among master's degree completers continues to be lowest at public institutions and highest at private non-profits. Between the 2014-15 & 2015-16 pooled cohort and the 2018-19 & 2019-20 pooled cohort, average debt at public institutions increased by just over \$1,000 (3%). Average debt at private non-profit institutions shows a similar (4%) increase over the time period, while for-profit institutions' average debt for master's degree earners decreased by \$780 (about 2%).

**Figure 2.** Average Student Loan Debt Among Master's Degree Students by Sector  
2014-15 & 2015-16 Cohort and 2018-19 & 2019-20 Cohort

	Public	Private Non-Profit	For-Profit
2018-19 & 2019-20	\$39,111	\$53,276	\$43,343
2014-15 & 2015-16	\$38,072	\$51,043	\$44,123

As with master's degree programs, Figure 3 shows that average debt for doctoral degree programs is lower at public institutions, though by a more significant margin; average debt is almost 48 percent higher at private non-profit institutions than at public institutions. Compared to master's degree programs, debt for doctoral degrees has increased at a higher rate across all sectors: nearly 12 percent at public institutions and over nine percent at private non-profit institutions. However, doctoral programs at for-profit institutions stand out as the most expensive for both cohorts, and their average debt has increased by nearly 15 percent, or more than \$15,000.

**Figure 3.**
**Average Student Loan Debt Among Doctoral Degree Students by Sector**  
 2014-15 & 2015-16 Cohort and 2018-19 & 2019-20 Cohort


Changes in average debt for professional degree programs paint a different picture in Figure 4 than seen with master's and doctoral degree levels. While average loan debt for professional degrees increased by nearly \$18,000 for public institutions (14%) and by more than \$15,000 for private non-profit institutions (10%), average debt decreased at for-profit institutions by about \$18,000 (12%). Professional degree programs at for-profit institutions reported the highest average debt across all sectors for the 2014-15 & 2015-16 pooled cohort, but the lowest average debt for the most recent 2018-19 & 2019-20 pooled cohort.

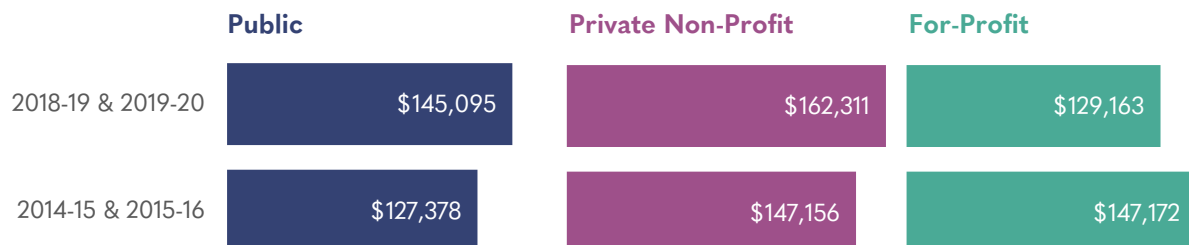
**Figure 4.**
**Average Student Loan Debt Among Professional Degree Students by Sector**  
 2014-15 & 2015-16 Cohort and 2018-19 & 2019-20 Cohort


Table 1 presents 25 master's degree programs with the highest average debt. Master's programs with the highest debt cross a wide range of careers, including programs in the medical field, as well as writing and arts programs. Most of the top 25 are between \$60,000 and \$70,000 in average debt, and just four exceed \$100,000.

**Table 1.**
**Highest Average Student Loan Debt Among Master's Degree Programs**
*2018-19 and 2019-20 Graduates*

Program	Average Debt	Total Borrowers	Total Programs
Advanced/Graduate Dentistry and Oral Sciences	<b>\$189,049</b>	239	13
Allied Health and Medical Assisting Services	<b>\$118,970</b>	580	12
Allied Health Diagnostic, Intervention, and Treatment Professions	<b>\$104,482</b>	14,610	215
Film/Video and Photographic Arts	<b>\$102,754</b>	1,323	31
Alternative and Complementary Medicine and Medical Systems	<b>\$97,667</b>	932	31
Dispute Resolution	<b>\$80,719</b>	128	6
Graphic Communications	<b>\$77,777</b>	181	5
Landscape Architecture	<b>\$74,294</b>	139	9
Real Estate Development	<b>\$71,215</b>	157	7
Historic Preservation and Conservation	<b>\$70,455</b>	82	6
Architectural Sciences and Technology	<b>\$69,774</b>	1,464	45
Drama/Theatre Arts and Stagecraft	<b>\$69,754</b>	1,215	55
Health Professions and Related Clinical Sciences, Other	<b>\$69,653</b>	613	18
Medical Clinical Sciences/Graduate Medical Studies	<b>\$67,800</b>	98	5
Research and Experimental Psychology	<b>\$66,726</b>	671	16
Rehabilitation and Therapeutic Professions	<b>\$65,193</b>	10,861	206
International Relations and National Security Studies	<b>\$64,191</b>	3,047	44
Communication, Journalism, and Related Programs, Other	<b>\$63,999</b>	249	5
International Business	<b>\$62,062</b>	697	20
Ecology, Evolution, Systematics, and Population Biology	<b>\$61,862</b>	1,072	24
Clinical/Medical Laboratory Science/Research and Allied Professions	<b>\$61,757</b>	273	11
Design and Applied Arts	<b>\$61,161</b>	848	27
Legal Research and Advanced Professional Studies	<b>\$60,349</b>	2,473	50
Genetics	<b>\$60,322</b>	156	11
Real Estate	<b>\$59,398</b>	628	19

**Note:** Analysis includes programs for which data is available from at least 5 institutions.

Similarly, the 25 master's degree programs with the lowest average debt in Table 2 cover a lot of territory: the humanities (romance languages, literatures, and linguistics; agriculture; bible/biblical studies), programs in STEM (mathematics, chemistry, and geology and earth sciences/geosciences), and practical/career-specialized (curriculum and instruction, teacher education and professional development, and quality control and safety technologies). Borrowers in various education programs make up the bulk of the borrowers in these 25 programs.

**Table 2.**
**Lowest Average Student Loan Debt Master's Degree Programs**  
2018-19 and 2019-20 Graduates

Program	Average Debt	Total Borrowers	Total Programs
Romance Languages, Literatures, and Linguistics	<b>\$23,927</b>	145	8
Environmental/Environmental Health Engineering	<b>\$23,933</b>	92	5
Educational/Instructional Media Design	<b>\$25,006</b>	3,527	80
Chemistry	<b>\$25,498</b>	106	7
Curriculum and Instruction	<b>\$25,559</b>	11,548	182
Theology and Religious Vocations, Other	<b>\$26,005</b>	152	8
Teaching English or French as a Second or Foreign Language	<b>\$26,161</b>	1,697	56
Mathematics	<b>\$26,588</b>	148	10
Civil Engineering	<b>\$28,026</b>	1,033	56
Agriculture, General	<b>\$28,724</b>	99	6
Industrial Engineering	<b>\$29,301</b>	188	12
Teacher Education and Professional Development, Specific Subject Areas	<b>\$29,525</b>	12,122	267
Ethnic, Cultural Minority, Gender, and Group Studies	<b>\$29,757</b>	105	7
Geological and Earth Sciences/Geosciences	<b>\$29,888</b>	247	14
Mechanical Engineering	<b>\$30,368</b>	913	52
Parks, Recreation and Leisure Facilities Management	<b>\$30,414</b>	197	10
Management Information Systems and Services	<b>\$30,505</b>	2,055	30
Quality Control and Safety Technologies/Technicians	<b>\$30,603</b>	368	9
Bible/Biblical Studies	<b>\$30,720</b>	145	7
Education, Other	<b>\$30,894</b>	971	28
Educational Administration and Supervision	<b>\$31,022</b>	23,217	418
Bilingual, Multilingual, and Multicultural Education	<b>\$31,366</b>	152	9
Teacher Education and Professional Development, Specific Levels and Methods	<b>\$31,436</b>	23,228	375
Accounting and Related Services	<b>\$31,467</b>	14,401	320
Food Science and Technology	<b>\$31,544</b>	84	5

**Note:** Analysis includes programs for which data is available from at least 5 institutions.

To take a closer look at the average debt burdens that are impacting the most students, Table 3 presents the average debt for the 25 master's degree programs with the largest 2018-19 & 2019-20 graduating cohort. As seen in the previous table, many education-related master's programs tend to have average debt in the low \$30,000 range. Some public sector fields outside of education, like social work, public administration, and public health, have much higher average debts, all over \$50,000.

**Table 3.** Average Student Loan Debt among Largest Master's Degree Programs  
2018-19 and 2019-20 Graduates

Cohort Size	Program	Average Debt	Total Programs
235,202	Business Administration, Management and Operations	\$44,244	812
97,470	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing	\$52,025	416
61,247	Social Work	\$51,296	272
46,906	Educational Administration and Supervision	\$31,022	418
44,546	Teacher Education and Professional Development, Specific Levels and Methods	\$31,436	375
35,917	Clinical, Counseling and Applied Psychology	\$54,467	321
34,711	Accounting and Related Services	\$31,467	320
32,420	Special Education and Teaching	\$32,374	292
32,214	Education, General	\$31,919	183
29,069	Management Sciences and Quantitative Methods	\$53,887	111
28,067	Public Health	\$53,039	217
27,454	Teacher Education and Professional Development, Specific Subject Areas	\$29,525	267
25,660	Curriculum and Instruction	\$25,559	182
24,801	Health and Medical Administrative Services	\$44,701	213
23,585	Mental and Social Health Services and Allied Professions	\$53,962	223
22,769	Public Administration	\$43,196	223
21,351	Student Counseling and Personnel Services	\$45,195	305
21,245	Computer and Information Sciences, General	\$40,768	78
20,212	Allied Health Diagnostic, Intervention, and Treatment Professions	\$104,482	215
17,025	Business/Commerce, General	\$50,508	71
16,807	Communication Disorders Sciences and Services	\$53,874	243
16,422	Rehabilitation and Therapeutic Professions	\$65,193	206
16,158	Human Resources Management and Services	\$43,337	143
14,710	Health and Physical Education/Fitness	\$32,743	193
13,135	Theological and Ministerial Studies	\$45,900	113

**Note:** Analysis includes master's degree programs with the largest 2018-19 and 2019-20 pooled cohorts and includes only programs for which data is available for at least 5 institutions.

While education programs were common on the list of lowest-debt master's degree programs, they appear multiple times among the highest-debt doctoral degree programs, including in the number one spot in Table 4. These programs are also some of the largest by cohort size.

**Table 4.**
**Average Student Loan Debt Among Largest Doctoral Degree Programs**
*2018-19 and 2019-20 Graduates*

Program	Average Debt	Total Borrowers	Total Programs
Education, General	\$135,192	1,501	33
Clinical, Counseling and Applied Psychology	\$127,914	2,023	61
Psychology, General	\$118,286	1,141	31
Public Health	\$109,286	519	14
Social Work	\$106,633	364	6
Human Resources Management and Services	\$99,892	249	6
Business Administration, Management and Operations	\$97,678	1,597	17
Health and Medical Administrative Services	\$93,691	193	6
Rehabilitation and Therapeutic Professions	\$92,771	1,654	22
Teacher Education and Professional Development, Specific Subject Areas	\$86,953	185	10
Communication Disorders Sciences and Services	\$85,013	273	13
Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing	\$79,544	2,538	54
Student Counseling and Personnel Services	\$75,302	106	7
Teacher Education and Professional Development, Specific Levels and Methods	\$75,215	245	8
Education, Other	\$71,707	206	11
Educational Administration and Supervision	\$68,029	4,993	166
Curriculum and Instruction	\$66,747	710	30
Theological and Ministerial Studies	\$62,818	157	9
Music	\$62,759	607	31
English Language and Literature, General	\$59,822	233	16
Educational Assessment, Evaluation, and Research	\$56,780	110	7
Health and Physical Education/Fitness	\$54,825	85	6

**Note:** Analysis includes programs for which data is available from at least 5 institutions.



The most popular professional degree programs are in law, general medicine, and other medical professions, as shown in Table 5. Nursing programs at the professional degree level have much lower average debt compared to other professional degree programs. Among the professional programs with the highest enrollment, dentistry has the highest average debt at over \$260,000—more than \$68,000 (35%) higher than the program with the second highest debt. Law programs, by far the largest in cohort size, land in the middle of this group with an average debt of over \$121,000.

**Table 5.**
**Average Student Loan Debt Among Largest Professional Degree Programs**  
 2018-19 and 2019-20 Graduates

Program	Average Debt	Total Borrowers	Total Programs
Dentistry	<b>\$264,439</b>	7,474	55
Chiropractic	<b>\$196,057</b>	3,274	10
Medicine	<b>\$184,197</b>	22,642	112
Optometry	<b>\$182,134</b>	1,465	17
Pharmacy, Pharmaceutical Sciences, and Administration	<b>\$140,509</b>	15,033	84
Law	<b>\$121,285</b>	38,536	170
Rehabilitation and Therapeutic Professions	<b>\$109,155</b>	4,029	53
Communication Disorders Sciences and Services	<b>\$90,919</b>	93	7
Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing	<b>\$77,933</b>	1,092	23
Dentistry	<b>\$264,439</b>	7,474	55

**Note:** Analysis includes programs for which data is available from at least 5 institutions.

Experts in both economics and higher education as well as policymakers on both sides of the political aisle have proposed potential solutions,<sup>11</sup> but the consequences of these proposed solutions—intended and unintended—remain unclear. Loan limits may prevent students from taking on unnecessarily high federal debt balances and could reduce federal debt on a surface level, but they could also steer students toward the more predatory private loan market.<sup>12</sup> One-size-fits-all loan limits could also create inequitable access to graduate programs for students with low incomes and students of color, and tailored loan limits could reduce incentives to pursue public service careers that are particularly valuable to society, such as teaching or social work.<sup>13</sup> Though most research evaluating graduate student loan borrowing tends to focus on return on investment and other economic outcomes, some have suggested crafting a more holistic evaluation that considers non-monetary factors.<sup>14</sup> Other policy recommendations emphasize more accountability for institutions, including more discretion in institutional funding and greater transparency in data reporting.<sup>15</sup>

The stakes are high for graduate student loan borrowing as the number of borrowers and average debt burdens continue to grow. A data-informed approach is essential to safeguarding students, taxpayers, and society from the burdens of excessive debt and ineffective programs and to preserving a diverse post-baccalaureate workforce.

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## Sources & Methodology

Unless otherwise noted, the tables and figures above are based on TICAS' analysis of the U.S. Department of Education (ED) data from College Scorecard. See College Scorecard, "All Data Files," available at <https://collegescorecard.ed.gov/data> (last updated October 10, 2024, last accessed November 4, 2024).

These data represent two-year pooled cohorts, with one year of overlap between each cohort (i.e. the 2014-15 & 2015-16 cohort and the 2015-16 & 2016-17 cohort). We calculate weighted averages of cumulative debt by level, sector, and CIP code for master's degree, doctoral degree, and first professional degree programs. Debt figures represent federal student loan debt (both Direct Loans and Grad PLUS loans) incurred for the credential earned at the specific institution where the credential was completed. For program-level analyses, we include only CIP codes for which data is available from at least 5 institutions.

Data are missing or privacy-suppressed for the majority of graduate programs in College Scorecard. For example, there are 47,243 graduate programs in the most recent year (debt data representing the 2018-19 and 2019-20 pooled cohorts), but 34,357 programs are missing average debt data. An additional 1,488 programs have average debt figures, but are missing the number of borrowers represented, which prevents us from using the program in calculating a weighted average. There are 375 unique CIP codes, but data are only available for 281, and only 244 CIP codes have data reported for at least 5 institutions.

## Endnotes

<sup>1</sup> Monarrez, T. & Matsudaira, J. (2023). *Trends in federal student loans for graduate school*. Department of Education. [https://sites.ed.gov/ous/files/2023/08/OCE\\_GraduateDebtReport202308.pdf](https://sites.ed.gov/ous/files/2023/08/OCE_GraduateDebtReport202308.pdf)

<sup>2</sup> Monarrez, T., & Matsudaira, J. (2023). *Trends in federal student loans for graduate school*. Department of Education. [https://sites.ed.gov/ous/files/2023/08/OCE\\_GraduateDebtReport202308.pdf](https://sites.ed.gov/ous/files/2023/08/OCE_GraduateDebtReport202308.pdf); Pyne, J., & Grodsky, E. (2020). Inequality and opportunity in a perfect storm of graduate student debt. *Sociology of Education*, 93(1), 20–39. <https://doi.org/10.1177/0038040719876245>

<sup>3</sup> Lee, V., & Looney, A. (2018, October 18). *Headwinds for graduate student borrowers: Rising balances and slowing repayment rates*. Brookings Institution. <https://www.brookings.edu/articles/headwinds-for-graduate-student-borrowers-rising-balances-and-slowing-repayment-rates/>; Pyne, J., & Grodsky, E. (2020). Inequality and opportunity in a perfect storm of graduate student debt. *Sociology of Education*, 93(1), 20–39. <https://doi.org/10.1177/0038040719876245>

<sup>4</sup> Akers, B., Arnold, N., Smith Ellis, Z., Jett, J., Little, B., Moultrie, T., & Shireman, R. (2023). *A framework for reforming federal graduate student aid policy*. The Century Foundation. <https://tcf.org/content/report/a-framework-for-reforming-federal-graduate-student-aid-policy/>; Gillen, A. (2023, October 20). *Reform graduate lending*. The James G. Martin Center for Academic Renewal. <https://www.jamesgmartin.center/2023/10/reform-graduate-lending/>

<sup>5</sup> Black, S. E., Turner, L. J., & Denning, J. T. (2023). PLUS or minus? The effect of graduate school loans on access, attainment, and prices (Working Paper No. 31291). National Bureau of Economic Research. <https://www.nber.org/papers/w31291>

- <sup>6</sup> Akers, B., Arnold, N., Smith Ellis, Z., Jett, J., Little, B., Moultrie, T., & Shireman, R. (2023). *A framework for reforming federal graduate student aid policy*. The Century Foundation. <https://tcf.org/content/report/a-framework-for-reforming-federal-graduate-student-aid-policy/>
- <sup>7</sup> TICAS calculations using data from the National Postsecondary Student Aid Study for 2019-20 (NPSAS:20-GR).
- <sup>8</sup> Swagel, P. (2023, 13 March). Phillip L. Swagel to Virginia Foxx and William Cassidy [Letter]. Retrieved from <https://www.cbo.gov/system/files/2023-03/58983-IDR.pdf>
- <sup>9</sup> Collier, D., Fitzpatrick, D., & Marsicano, C. R. (2022). Exploring the relationship of enrollment in IDR to borrower demographics and financial outcomes. *Journal of Student Financial Aid*, 51(2). <https://doi.org/10.55504/0884-9153.1740>; Miller, B. (2020). Graduate school debt: *Ideas for reducing the \$37 billion in annual student loans that no one is talking about*. Center for American Progress. <https://www.americanprogress.org/article/graduate-school-debt/>
- <sup>10</sup> Swagel, P. (2023, 13 March). Phillip L. Swagel to Virginia Foxx and William Cassidy [Letter]. Retrieved from <https://www.cbo.gov/system/files/2023-03/58983-IDR.pdf>
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Note: This report was updated in February 2025 to account for institutions reporting identical debt data for multiple branches.