

By Kevin Carey
and Erin Dillon

Debt to Degree: A New Way of Measuring College Success

The American higher education system is plagued by two chronic

problems: dropouts and debt. Barely half of the students who start college get a degree within six years, and graduation rates at less-selective colleges often hover at 25 percent or less. At the same time, student loan debt is at an all-time high, recently passing credit card debt in total volume.¹ Loan default rates have risen sharply in recent years, consigning a growing number of students to years of financial misery. In combination, drop-outs and debt are a major threat to the nation's ability to help students become productive, well-educated citizens.

The federal government has traditionally tracked these issues by calculating, for each college, the total number of degrees awarded, the percentage of students who graduate on time, and the percentage of students who default on their loans. Each of these statistics provides valuable information, but none shows a complete picture. A college could achieve a stellar graduation rate by passing students along and handing out degrees that have little value in the job market, making it difficult for graduates to earn enough money to pay off their debt. Alternatively, a college could keep tuition and loan default rates low while also providing a terrible education and helping few students earn degrees. Students choosing colleges and policymakers governing higher education need an overall measure of value, one that combines debt *and* graduation.

Education Sector has created such a measure, the “borrowing to credential ratio.” For each college, we have taken newly available U.S. Department of Education data showing the total amount of money borrowed by undergraduates and divided that sum by the total number of degrees awarded. The results are revealing:

- Nationwide, the overall borrowing to credential ratio has risen sharply in recent years.
- Certain segments of the higher education industry—in particular, for-profit colleges—are racking up far more student debt per degree than others.
- State policies matter a great deal, with seemingly similar public university systems achieving widely varying results for students.
- Among elite colleges and universities, some are making good on their pledge to help low- and middle-income students graduate without major financial burdens while others are riding a wave of student debt to fame and fortune.



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The National Picture

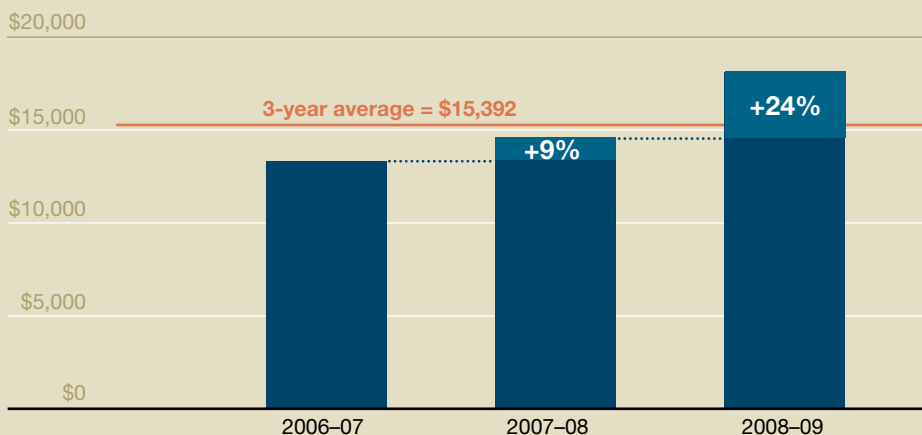
We calculated the borrowing to credential ratio for the three most recent academic years with available data: 2006–07, 2007–08, and 2008–09. As **Chart 1** shows, the average amount of student debt needed to produce a degree in America is increasing rapidly. In 2006–07, students borrowed \$13,334 for every credential earned.² In 2007–08, that amount rose to \$14,560, a 9 percent increase. In 2008–09 it rose by another 24 percent to \$18,102.

A number of factors are fueling this trend. The overall cost of higher education has been rising for years, increasing by 3.1 percent above inflation throughout the 1990s and 3.8 percent during the 2000s.³ The recent economic downturn made things worse, as cash-starved states cut public university budgets, and universities responded by jacking up tuition. At the same time, unemployment rose and family income fell, forcing more students and parents to borrow in order to pay fast-rising tuition bills. The national borrowing to credential ratio is moving in a troubling direction. It is taking more and more debt to produce a degree.

CHART 1

The national borrowing to credential ratio is growing rapidly.

Average borrowing to credential ratio, undergraduate federal student loans, 2006–2009



Source: Author analysis of undergraduate borrowing data obtained from the U.S. Department of Education for 2006–07, 2007–08, and 2008–09, and the number of credentials awarded based on data from the Integrated Postsecondary Education Survey for 2006–07, 2007–08, and 2008–09. See appendix for details on the methodology.

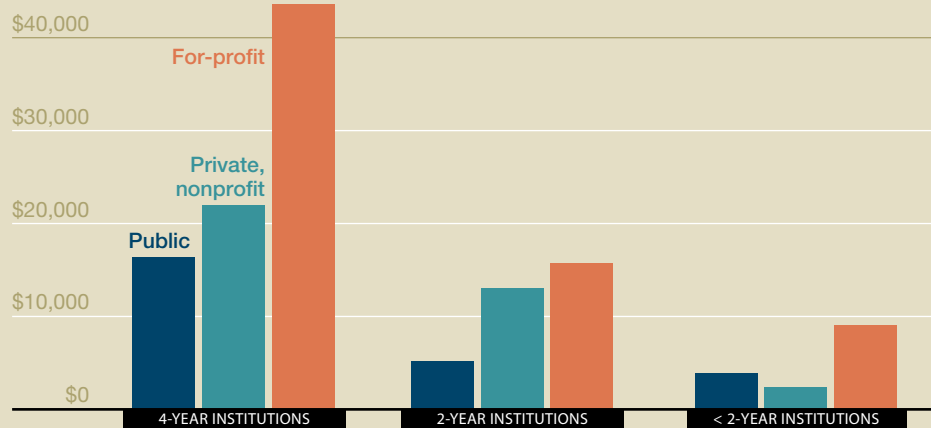
Different Sectors, Different Trends

While the borrowing to credential ratio increased in every sector of higher education from 2006 to 2009, ratios in some sectors were much larger and grew much faster than others. The average ratio at four-year institutions was \$18,559 over the three-year period, more than double the \$7,218 at two-year institutions. This is to be expected: four-year institutions provide a longer education and generally charge more per credit than two-year institutions, particularly low-cost community colleges where borrowing is still relatively uncommon.

CHART 2

Borrowing to credential ratios at for-profits are higher than elsewhere.

Borrowing to credential ratio by sector, 2006–2009



Source: Author analysis of undergraduate borrowing data obtained from the U.S. Department of Education for 2006–07, 2007–08, and 2008–09, and the number of credentials awarded based on data from the Integrated Postsecondary Education Survey for 2006–07, 2007–08, and 2008–09. See appendix for details on the methodology.

But within the four- and two-year sectors, there are sharp differences in the borrowing to credential ratio. As **Chart 2** shows, the average ratio at public four-year universities was \$16,247. At private nonprofit colleges and universities, it was \$21,827. For-profit universities, by contrast, produced \$43,383 in debt for every degree. This difference is arguably even more significant than it seems. While public and private four-year institutions are overwhelmingly in the business of granting four-year degrees (90 percent of their undergraduate degrees were bachelor's degrees in 2008–09), for-profit four-year institutions tend to grant significant numbers of two-year associate degrees and shorter-term credentials (56 percent of their degrees in 2008–09). These less-valuable credentials should presumably cost students less, yet the amount of debt taken on by students to obtain them is significant.

The same pattern exists among two-year and less-than-two-year institutions: borrowing to credential ratios at for-profit colleges are higher than elsewhere. In addition, these figures only show borrowing in the federal student loan program. So-called “private” student loans, which are made by banks and private lenders at interest rates that frequently run to the double-digits, are more prevalent among students attending for-profit colleges.⁴ If they were included in the calculations, borrowing to credential ratios at for-profit colleges would presumably look even worse.

Public universities receive direct government subsidies to keep tuition low, so it is to be expected that their students will borrow less. But private nonprofit colleges do not receive such subsidies, and their borrowing to credential ratios are still much lower than their for-profit competitors. There are several reasons for this. The for-profit industry expanded rapidly between 2006 and 2009, so there may be a

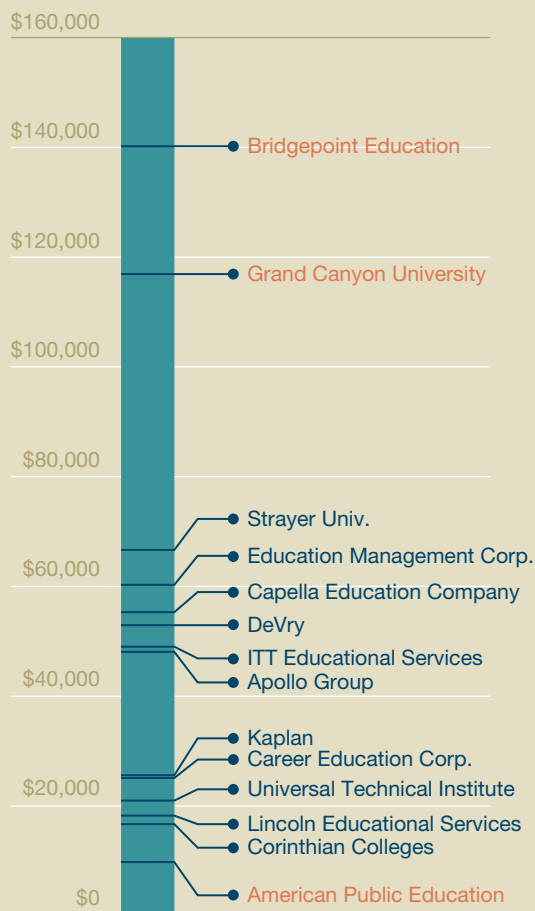
disproportionate number of students in the system who have borrowed but not yet graduated.⁵ Overall graduation rates at many for-profits are very low—37 percent at for-profit four-year institutions, for example.⁶ Borrowing rates at for-profits are often very high. Large for-profits like The University of Phoenix and Kaplan University get over 80 percent of their revenues from federal grant and loan programs, and recruiters actively encourage students to take out loans.⁸ And while the “sticker price” at private nonprofit colleges is frequently substantial, those institutions also provide many students with tuition discounts that for-profits do not.

As **Chart 3** shows, there are also significant differences in the borrowing to credential ratio within the for-profit industry. Among publicly traded for-profit higher education companies, American Public Education (which runs the American Public University System and American Military University) has a ratio of just \$9,728. Tuition at these colleges is relatively low (in the range of \$6,000), and a significant number of students are current and former members of the armed services who use military tuition assistance to help pay for college.

CHART 3

Not all for-profits are the same.

Borrowing to credential ratio for publicly traded education companies, 2006–2009



Why so high?

Bridgepoint and Grand Canyon recently increased their enrollment significantly, but have not had long enough to graduate many of these students.

Why so low?

At American Public Education, tuition is around \$6,000 and a large number of students use military tuition assistance to help pay for college.

Source: Author analysis of undergraduate borrowing data obtained from the U.S. Department of Education for 2006–07, 2007–08, and 2008–09, and the number of credentials awarded based on data from the Integrated Postsecondary Education Survey for 2006–07, 2007–08, and 2008–09. See appendix for details on the methodology.

Corinthian Colleges and Lincoln Educational Services have ratios that are comparable to public and private nonprofit universities, \$16,560 and \$18,209, respectively. This is because most of the degrees they grant (81 percent) are one- or two-year certificates for jobs like medical assistant or electrician. For-profits that focus on bachelor's degrees, by contrast, don't fare as well. The Apollo Group, the parent company of the industry-leading University of Phoenix, has a borrowing to credential ratio of \$48,107. Apollo Group students borrowed over \$6.5 billion from 2006 to 2009. Strayer Education's numbers are even worse, producing a \$66,651 ratio. The two largest ratios among publicly traded for-profits were found at Grand Canyon University and Bridgepoint Education, each exceeding \$100,000. In part, this is because Grand Canyon and Bridgepoint are the newest big players in the for-profit industry, each enrolling tens of thousands of new students online in the mid-to-late 2000s. In their case, there may be a lag between initial borrowing and subsequent graduation that artificially inflates their borrowing to credential ratio. There may also be problems with graduation. Recent hearings conducted by the United States Senate Committee on Health, Education, Labor and Pensions, found that after Bridgepoint acquired a small, Franciscan college renamed Ashford University in 2005, enrollment grew from 400 students to almost 43,000, nearly all studying online. The current graduation rate at Ashford is roughly 30 percent.⁹

State Policy Matters

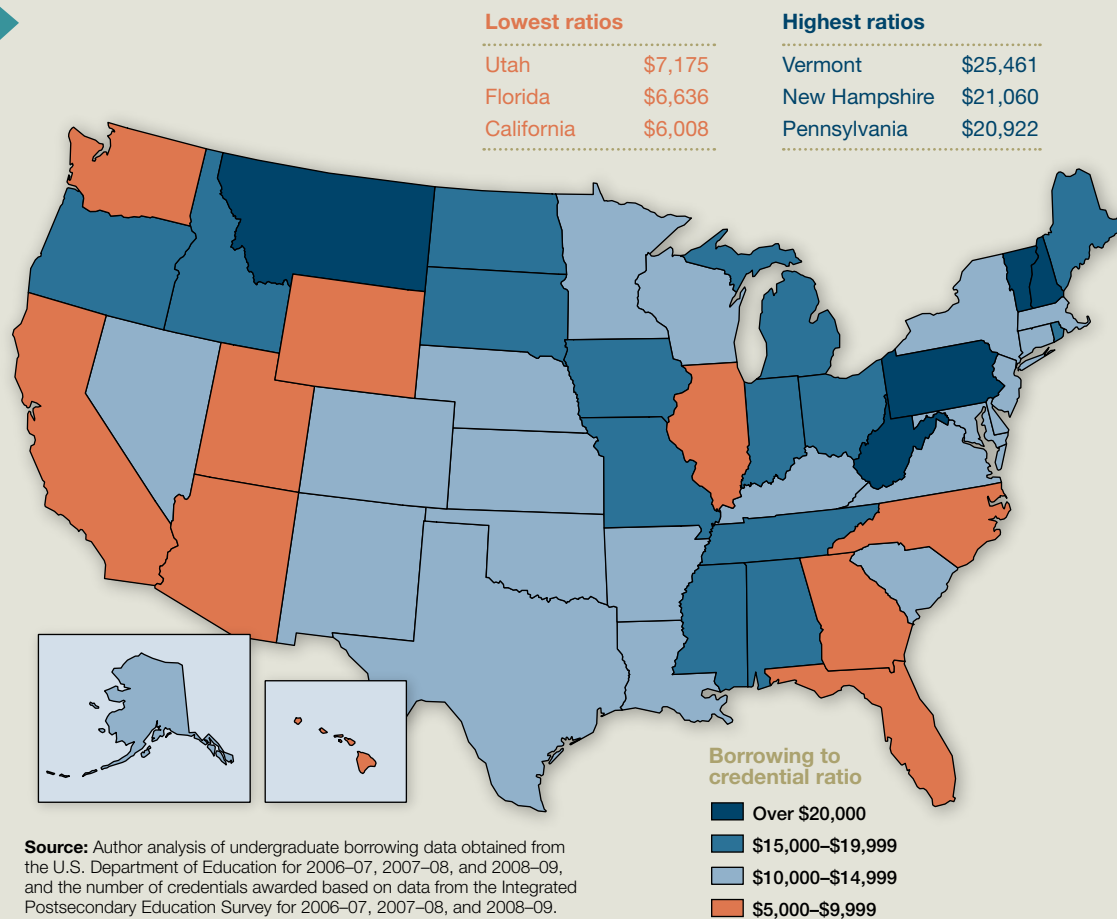
Traditional public universities produce lower borrowing to credential ratios than for-profit colleges, on average. But there is still much variation within the public sector. Consider Iowa State University and Florida State University. On the surface, they look very similar. Founded in the 1850s, both are large, public universities that conduct a significant amount of research but play second fiddle to their state's flagship university. Both graduate just over two-thirds of their students within six years, most of whom attend college full-time and are of traditional college-going age. The average ACT scores of entering freshman are similar (mid-20s) as are the percentages of students who receive Pell grants. The total cost of attending each institution is very similar—Iowa costs \$165 more.

But the borrowing to credential ratio shows that appearances can be deceiving. Iowa State students borrow \$20,237 per degree earned. This is almost double the ratio at Florida State, which is \$10,888.

The difference is state policy. All states subsidize higher education, but some are more generous than others. Students who pay less borrow less, and that affects the borrowing to credential ratio. **Map 1** shows the overall borrowing to credential ratio at public institutions in all 50 states.

MAP 1

There is a wide variation in borrowing to credential ratios among states.



The lowest, at \$6,008, is in California, a state with a long tradition of keeping prices at public two- and four-year institutions low. Tuition at California community colleges is only \$26 per credit hour, and 58 percent of first-time freshmen in the Golden state enroll in a two-year school.¹⁰ Florida has the second-lowest ratio at \$6,636. At the other end of the spectrum, Vermont and New Hampshire have ratios of \$25,461 and \$21,060, respectively. Not surprisingly, these two states spend less per capita on higher education than any other.¹¹ There is a strong statistical correlation between how much states invest in their higher education systems and how much students ultimately borrow per degree.¹²

State financial aid policies also make a difference. The state of Florida has several generous grant programs that help students afford college, while Iowa focuses its financial aid assistance on private institutions. The state's most substantial form of need-based assistance, the Iowa Tuition Grant Program, is not available for students at public institutions. That program provides \$3,700 annually for undergraduates at private, nonprofit institutions or \$1,560 for students at private, for-profit colleges, and costs Iowa \$53.4 million in 2008–09. By contrast, the most widely available state grant aid for students at public institutions is the \$1,000 Iowa

Grant, which costs the state just \$1.8 million in 2008–09.¹³ The end result is that Florida spends \$585 more per student in grant aid than Iowa, and this additional grant aid translates into lower debt for each credential produced at Florida public institutions.¹⁴

Favoring Flagships

State policies also produce another notable borrowing to credential ratio trend: ratios are consistently lower at state flagship universities.¹⁵ In 2006–07, the average ratio at state flagship universities was \$1,783 lower than at other public universities. By 2008–09, that difference had grown to \$2,549, a 43 percent increase. This is despite the fact that average tuition and fees at state flagship universities were \$2,072 *higher* than at other public universities in 2008–09.

In part, this is because flagship universities tend to be the most selective and enroll students who are wealthier and more academically prepared. Well-off students have less need to borrow, and well-prepared students are more likely to earn degrees. Flagship universities tend to receive more funding per-student from the state and have a greater capacity to raise money from wealthy alumni that can be used to defray tuition for low-income students.

State financial aid policies also contribute to the difference. Georgia's well-known HOPE scholarship program has successfully used the lure of generous scholarships to keep promising students in-state at the flagship University of Georgia. Many of these students come from well-off households to begin with, and the HOPE scholarship makes their cost of attending college quite low.

Florida provides another example. The state's "Bright Futures" scholarship program offers differing levels of financial aid to students based on their academic performance in high school and score on college entrance tests such as the SAT and ACT. Students with the best marks can earn up to \$101 a credit, while students who did well but missed the top threshold can receive up to \$76 a credit.¹⁶

Although the percentage of students who received a Bright Futures award at the flagship University of Florida is roughly the same as at Florida State, University of Florida students were more likely to be in the top award category.¹⁷ Florida's endowment is more than three times that of Florida State, giving it relatively more resources to provide students with grants and reduce their need to borrow.¹⁸ In 2008–09, only 53 percent of the University of Florida's degree-seeking undergraduates applied for financial aid, compared to 65 percent at Florida State.¹⁹ Florida's graduation rate is 10 percentage points higher. In sum, these differences produced a \$6,087 borrowing to credential ratio at Florida from 2006 to 2009, while Florida State's ratio was nearly \$11,000.

Money Matters at Elite Schools

At the top of the higher education heap lie elite private research universities. These world-famous institutions have their pick of students and operate free from most state policies. But the borrowing to credential ratio reveals large differences among them. **Chart 4** shows the ratio for the 33 private institutions classified as top research universities by the Carnegie Foundation.

Like most such universities, Princeton charges a top-dollar sticker price: \$36,640 per year. But its borrowing to credential ratio is miniscule at \$2,385. Many Princeton students are very wealthy. So is the university, which has a \$14.4 billion endowment. Since 2002, Princeton has had a policy of not including loans in the financial aid package it awards students who can't afford to pay full tuition.²⁰ Nineteen of the universities listed on Chart 4 have some form of this “debt pledge.”²¹ Their average ratio was \$9,688. The 14 universities without the pledge, by contrast, have an average borrowing to credential ratio of \$17,504.

The single largest ratio among elite private research universities can be found at New York University, whose \$25,886 ratio of borrowing to debt exceeds that of some for-profit colleges. Graduation isn't a problem at NYU—86 percent of students who start earn degrees there. But NYU is a relatively new arrival on the elite research university scene and does not have the kind of endowment that comes from educating the rich and powerful for decades or more. While there are no national comparable statistics on student wealth, it's likely that NYU students are not as well-off as those who attend competitor schools. As a result, many borrow large amounts of money to attend NYU.

Stopping the Trends

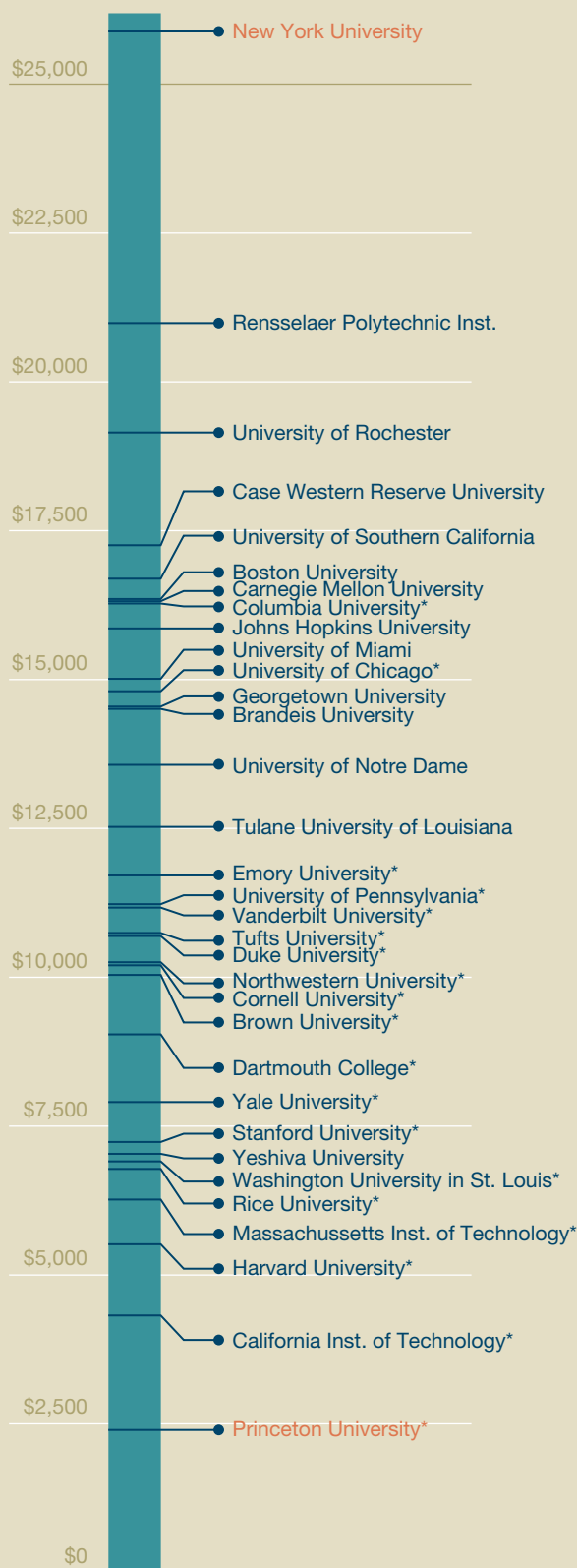
Borrowing is increasingly the norm in American higher education. The long-term consequences of floating colleges on a sea of debt have yet to be fully realized, as a growing number of students leave school with tens of thousands of dollars in loans that can take as long as 30 years to repay and cannot be discharged in bankruptcy. National graduation rates have been stagnant for decades, and many competitor nations are helping more adults earn valuable college degrees. The sharp increase in the national borrowing to credential ratio suggests that urgent action is needed to arrest these trends.

Fortunately, concrete steps can be taken to solve these problems. States and colleges can re-orient their financial aid policies toward students who need financial aid the most. They can also focus more attention on counseling and academic support for students who are at-risk of dropping out. States like Iowa can learn from more successful states like Florida. New regulations like the “gainful employment”

CHART 4

Among the elite colleges, the borrowing to credential ratio varies greatly.

Borrowing to credential ratio at elite colleges, 2006–2009

**Why so high?**

NYU lacks a large endowment, and its students may not be as well off.

Why so low?

Princeton charges top dollar for tuition, but it has a huge endowment and wealthy students and a policy of not including loans in aid packages for less well-off students.

* = Debt pledge.

Source: Author analysis of undergraduate borrowing data obtained from the U.S. Department of Education for 2006–07, 2007–08, and 2008–09, and the number of credentials awarded based on data from the Integrated Postsecondary Education Survey for 2006–07, 2007–08, and 2008–09. See appendix for details on the methodology.

rules recently put in place by the U.S. Department of Education can rein in for-profit colleges that load up students with unmanageable financial obligations. Without such reforms, colleges and students will increasingly be drowning in debt.

Appendix

The borrowing to credential ratio is the product of two datasets. The credential part of the ratio comes from the annual completion survey submitted by institutions in the U.S. Department of Education's Integrated Postsecondary Education Data System, or IPEDS. This information tracks the number of certificates and degrees awarded at or below the bachelor's degree level for thousands of colleges across the country. Borrowing data, meanwhile, were provided by the U.S. Department of Education and include the total amount of federal student loan debt incurred by students attending any type of undergraduate program, broken down by institution and reported for the 2006–07, 2007–08, and 2008–09 academic years. The exclusion of graduate programs is important because those offerings, like medical or law schools, tend to have even higher price tags, greater borrowing rates, and only a few completers.

The ratio is gained simply by dividing the borrowing data by the credential data for each year. For example, in 2008–09, the University of Florida reported granting 9,484 credentials. In that same year, students at the University of Florida borrowed \$65,067,123. The borrowing to credential ratio for the University of Florida in 2008–09, then, was $\$65,067,123 \div 9,484$, or \$6,861 borrowed per credential. The measure uses the amount borrowed by all students enrolled in an institution, and not just those who are graduating, because this captures the cumulative debt investment for each credential.

To calculate the total borrowing to credential ratio across all three years, the total amount borrowed in all three years was divided by all credentials granted in those three years. Aggregating data across all three years has the effect of smoothing out large single year fluctuations in borrowing and credentialing.

There are two limitations to the calculation. First, schools with substantial enrollment increases will fare poorly on the ratio because the additional debt from these students will be immediately recorded, but the corresponding increase in credentials will take a few years to occur. Second, the ratio complicates comparisons between institutions granting different types of credentials. The ratio for an institution that primarily awards two-year associate degrees, for example, will likely be lower than an institution that primarily awards four-year bachelor's degrees, making it difficult to determine which of these institutions is doing a better job of producing credentials for the amount of borrowing. One option could be to weight credentials in the ratio based on program length in order to allow better comparisons between different

types of institutions, but this is difficult because certificate programs vary in length, and it would be hard to determine the appropriate weights for these programs. A spreadsheet with the borrowing to credential ratio for all 4,934 institutions included in our analysis can be [downloaded from our website](#). The spreadsheet includes the undergraduate borrowing and undergraduate credential data used to calculate the ratio.

Notes

1. Mary Pilon, "Student-loan Debt Surpasses Credit Cards," *The Wall Street Journal*, August 9, 2010.
2. This does not represent the average amount of money that each graduate borrowed. That amount was \$18,624 in 2007–08 according to the National Postsecondary Student Aid Study and has also been rising. The borrowing to credential ratio represents the total amount of borrowing divided by the total number of degrees awarded, which includes students who did not borrow. This provides a more accurate overall measure for individual colleges because a college could, for example, have only 10 percent of students borrowing but have a high amount of debt per borrower. See the Appendix for a detailed description of how the borrowing to credential ratio is calculated. A spreadsheet with the borrowing to credential ratio for all 4,934 institutions included in our analysis can be [downloaded from our website](#). The spreadsheet includes the undergraduate borrowing and undergraduate credential data used to calculate the ratio.
3. *Trends in College Pricing 2010* (Washington, D.C.: College Board, 2010).
4. Kevin Carey and Erin Dillon, *Drowning in Debt: The Emerging Student Loan Crisis* (Washington, D.C.: Education Sector, July 8, 2009).
5. See National Center for Education Statistics, "A Closer Look at Postsecondary Education by Institution Level and Control: Enrollment and Degrees Conferred," <http://nces.ed.gov/programs/coe/analysis/2011-section1.asp> (Accessed July 21, 2011).
6. Author analysis of 150 percent graduation rates for all four-year, for-profit institutions using the Integrated Postsecondary Education Data Survey.
7. National Center for Education Statistics, "Table 356: Percentage of part-time or part-year undergraduates receiving aid, by type and source of aid and control and type of institution: Selected years, 1992–93 through 2007–08," http://nces.ed.gov/programs/digest/d10/tables/dt10_356.asp (Accessed July 21, 2011).
8. U.S. Department of Education, "Data Center: Proprietary School 90/10 Revenue Percentages," <http://federalstudentaid.ed.gov/datacenter/proprietary.html> (Accessed July 21, 2011).

9. Statement of Kathleen S. Tighe Inspector General, U.S. Department of Education before the Committee on Health, Education, Labor and Pensions, United States Senate (March 10, 2011).
10. California Postsecondary Education Commission, "Freshmen Pathways," <http://www.cpec.ca.gov/OnLineData/FreshmenPathway.asp> (Accessed July 21, 2011).
11. Illinois State University's Center for the Study of Education Policy http://www.grapevine.ilstu.edu/tables/FY09/GPV_FY09_National_Tables.xls
12. Author analysis of average educational expenditures per full-time equivalent student for 2007–09, *State Higher Education Finance Report FY2010*, (Boulder, CO: State Higher Education Executive Officers, March 2011) and average borrowing to credential ratios for each state ($r = -.55$, $p < .01$).
13. Iowa College Student Aid Commission, "Scholarships & Grants," <http://www.iowacollegeaid.gov/ScholarshipsGrants/scholarshipsgrants.html> (Accessed July 28, 2011). National Association of State Student Grant and Aid Programs, "State Data Quick Check: Iowa 2008–09," http://www.nassgap.org/survey/state_data_check.asp (Accessed July 28, 2011).
14. 40th Annual Survey Report on State-Sponsored Student Financial Aid, 2008–09 (Washington, D.C.: National Association of State Student Grant and Aid Programs, 2010).
15. Many states have a clear flagship university, such as the University of Maryland, College Park; Ohio State University; or the University of Michigan—Ann Arbor. In those cases the borrowing to credential ratio for that flagship school was compared to the state's other public, four-year institutions. In many other states, though, there is less of a clear distinction between a single flagship and other public institutions—for example the University of Mississippi and Mississippi State University or the University of Alabama and Auburn University. In those cases, the school identified as the "flagship" is the one identified as the "university of" rather than the main "state university" campus. There are three exceptions to this rule. For California, both the University of California branches at Berkeley and in Los Angeles were included. Both Indiana University—Bloomington and Purdue University's main campus were identified as flagships in Indiana. And for New York, which lacks the clearest flagship, Stony Brook University, the University at Buffalo, and the State University of New York branches at Albany and Binghamton were all included. No schools from four states—Delaware, Rhode Island, Wyoming, and Pennsylvania—plus the District of Columbia were included in this analysis. For the first three states plus the district there were an insufficient number of public four-year institutions to make a comparison. Pennsylvania is not included because the Pennsylvania State University System does not disaggregate data by its campuses, meaning the main flagship campus is lumped in with other branches. All told, 51 flagship institutions were considered versus 515 other public four-year colleges or universities.

16. Florida Student Scholarship and Grant Programs, “2011–12 Award Amounts Per Credit Hour,” <http://www.floridastudentfinancialaid.org/ssfad/bf/awardamt.htm> (Accessed July 21, 2011).
17. Karen Fooks, director of the Office for Student Financial Affairs at the University of Florida, in discussion with author, February 09, 2011; Darryl Marshall, director of financial aid at Florida State University, in discussion with author, February 10, 2011.
18. Total assets for the University of Florida were \$1.51 billion as of June 30, 2010 (University of Florida Foundation, “Endowment and Total Assets,” <http://www.ufl.edu/AboutUFF/Endowment.asp> (Accessed July 21, 2011). Florida State University reported total assets of \$447 million as of June 30, 2010, *2010 Annual Report* (Tallahassee, FL: The Florida State University Foundation).
19. University of Florida Office of Institutional Planning and Research, “Common Data Set: Financial Aid 2009,” http://www.ir.ufl.edu/OIRApps/commondataset/h_financialaid.aspx (accessed July 22, 2011); Florida State University Office of Institutional Research, “Surveys and Data Requests: Common Data Set 2008–09,” http://www.ir.fsu.edu/surveys.cfm?ID=common_data (accessed July 22, 2011).
20. <http://www.princeton.edu/pr/news/01/q1/0127-aid.htm>
21. The list of schools with a debt pledge was obtained from the Project on Student Debt’s website at http://projectonstudentdebt.org/pc_institution.php

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