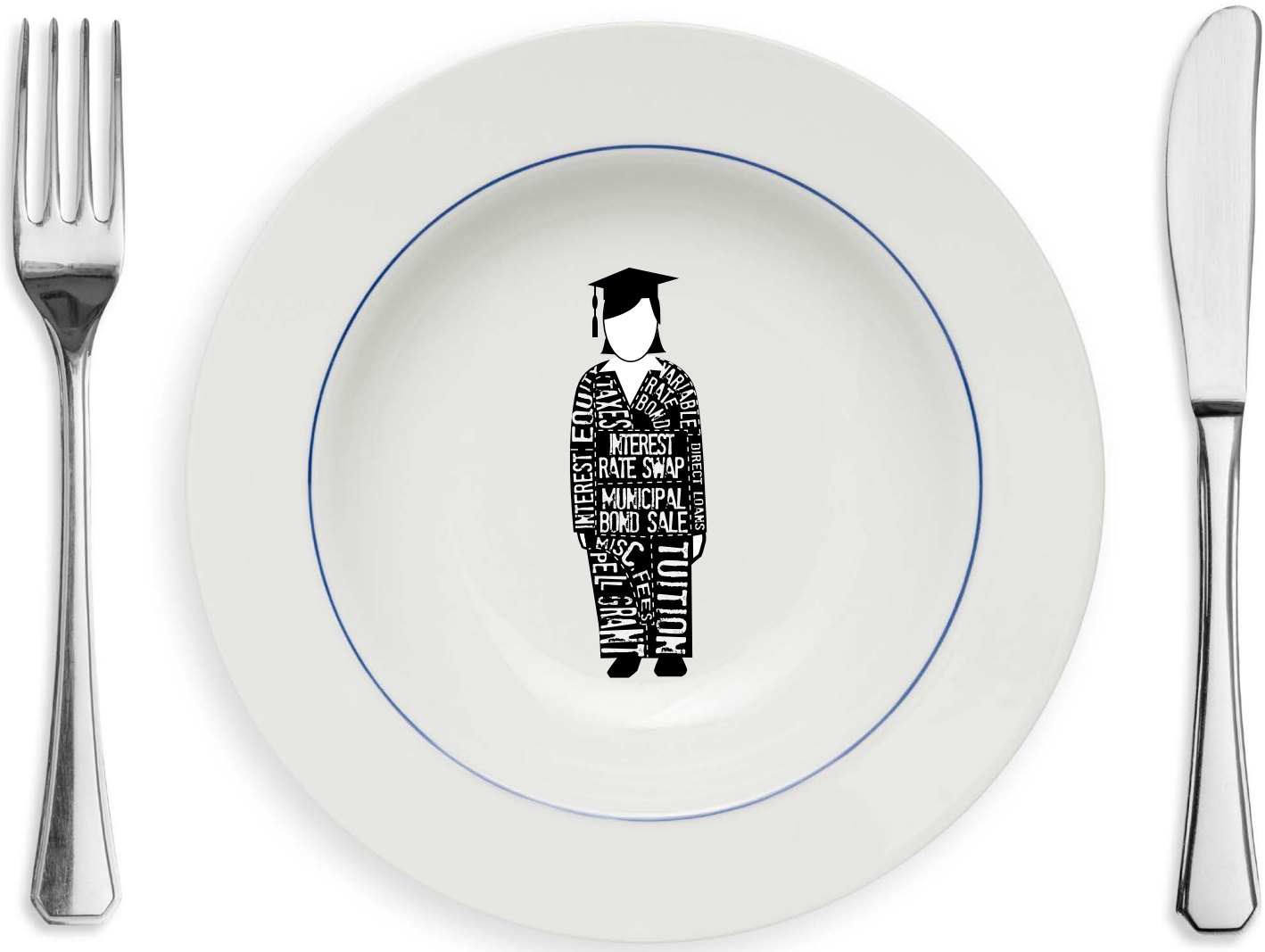
# BORROWING AGAINST THE FUTURE

## The Hidden Costs of Financing U.S. Higher Education

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# INTRODUCTION

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America's higher education system is gaining a reputation for high costs and large inequities. In 2012, the U.S. spent $491 billion on higher education [1] and twice [2] as much per student than comparable industrialized countries. Where is all that money going?

Scholars have offered several explanations for these high costs including faculty salaries, administrative bloat, and the amenities arms race. [3] These explanations, however, all miss a crucial piece of the puzzle. In fact, financing costs for college institutional debts, equity investments in for-profit colleges, and student loans have also come to soak up a growing portion of educational expenditures by households, taxpayers, and other private funders of higher education.

In recent years, students' families and colleges have increasingly sought capital from three main financial markets. Public colleges faced declining state appropriations, and the average cost of tuition, room, and board increased much faster than grant aid for needy students. [4] This pushed families to borrow increasing amounts from student loan markets to pay for college costs. [5] Private and public colleges increased institutional borrowing, particularly from municipal bond markets for capital projects. [6] And the rapid growth of for-profit colleges was fueled by equity investors that provided them with capital. All of this financing comes at great cost, in the form of either interest payments or profits earned to satisfy equity investors.

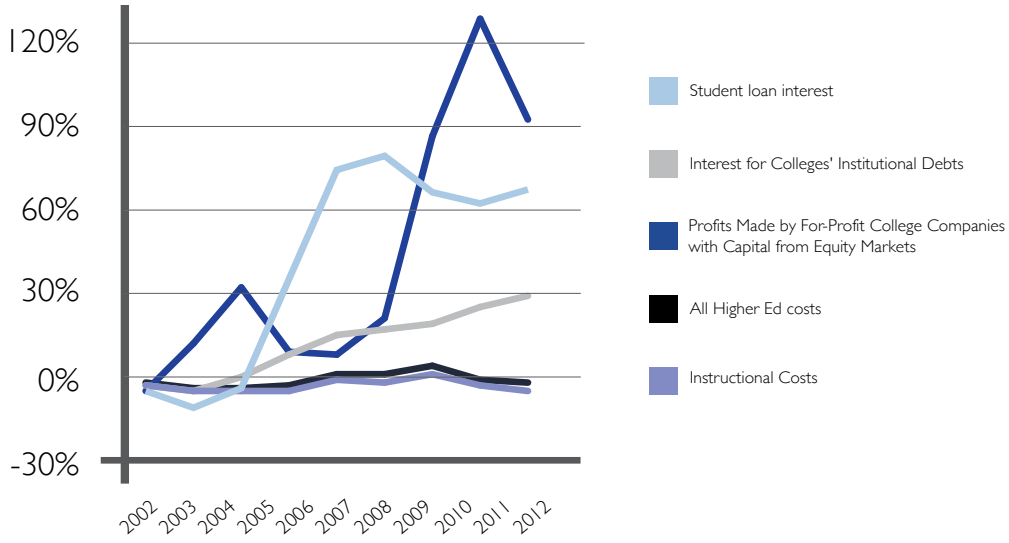
In this report, we estimate – for the first time – the total cost to the American higher education system of reliance on capital from each of these markets. The report covers the years for 2002 to 2012 – the only years for which adequate data are available. [7] For student loans, we estimate the total interest paid annually on all outstanding student loans — both private and federal. For institutional borrowing, we describe total interest payments on college and university debts — the largest share of which went to funding amenities. [8] In the case of for-profit colleges with capital from equity markets, we estimate the costs to students and taxpayers of profits made by these institutions —and the vast share of revenue they brought in from federal student aid programs — to satisfy stock shareholders and private equity investors. Except where noted, our estimates cover all colleges that received federal Higher Education Act Title IV funds [9] and granted two-year, four-year, or graduate degrees between 2002 and 2012.

For 2002, the three financial costs totaled $21 billion in 2012 constant dollars. [10] These costs began to rise steeply in 2005, reaching $40 billion in 2009. In 2009, more than $3 billion of these costs were

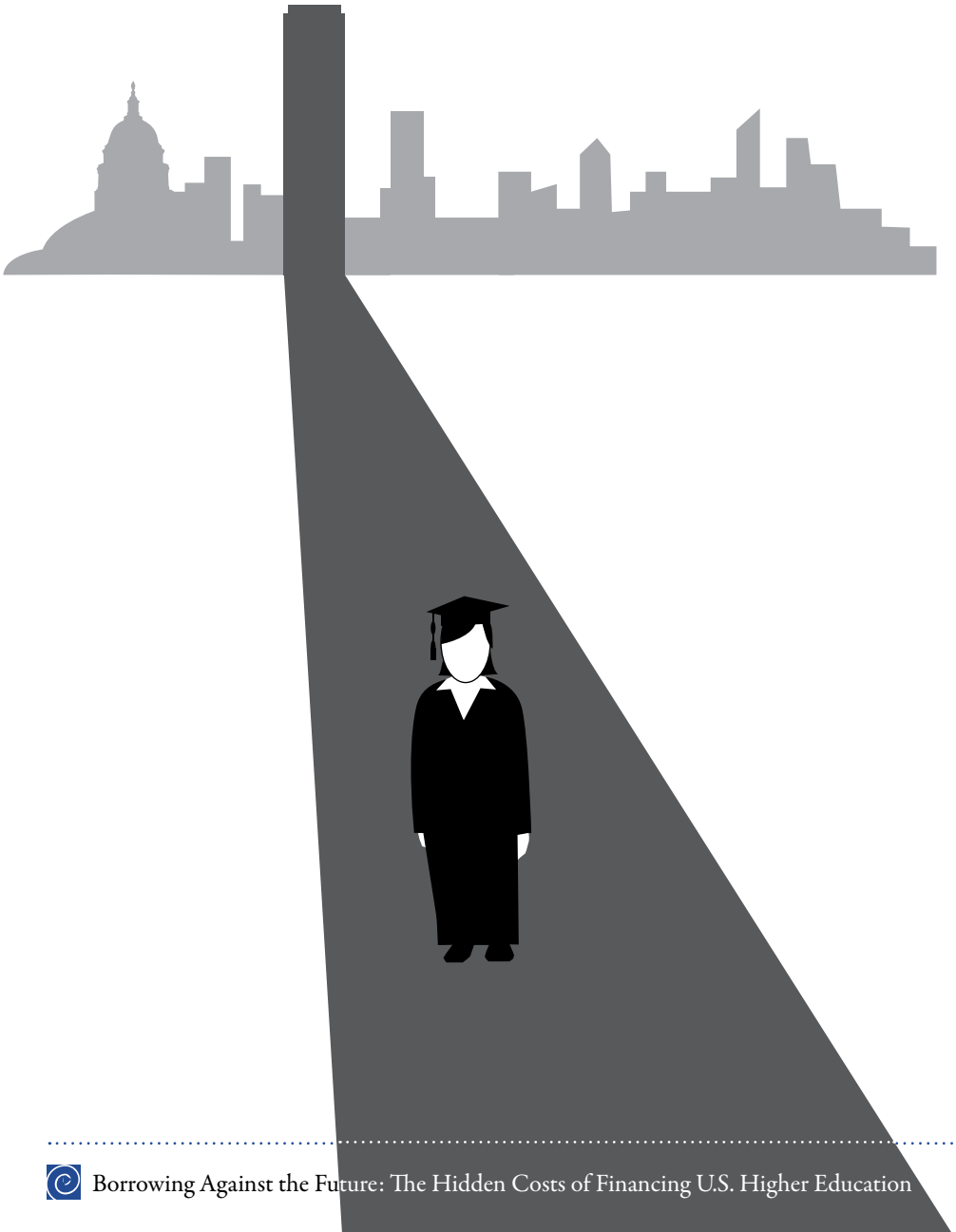
operating profits for for-profits owned by equity investors. More than $8 billion was spent on interest for colleges' institutional debts. More than $28 billion was spent on interest for student loans. As student loan interest payment growth slowed, overall growth in the three financial costs slowed as well until reaching $45 billion or nine percent of all higher education spending in 2011, up from just five percent in 2004. [11] Overall growth was flat in 2012 due to a dramatic decline in earnings by for-profits capitalized by equity markets. Note that these figures do not include additional costs associated with financial services for colleges, such as fees for commercial banking services, endowment and investment management, and interest rate swaps. Nor do these figures account for spending on interest for home equity, credit card or other consumer debts that may be used to pay for college costs. Likewise, our estimates do not include students' fees for campus debit and credit cards. We lack comprehensive data for these costs across the higher education system.

Neither inflation nor the growth of higher education enrollment

**FIGURE 1:** Cumulative Percent Change in Higher Ed Costs Per Student Since 2002




*Source: Author calculations using data from IPEDS, income sheets for publicly traded for-profit colleges, the College Board, Department of Education, Consumer Finance Protection Bureau, and FinAid.org. See text for further explanation.*



accounts for the growth of these financing costs. The financing costs totaled $1,865 *per currently enrolled student* in 2002 in constant (2012) dollars. By 2012, these costs had grown to $2,861 per student, an increase of 53 percent in real terms. In comparison, spending on instruction remained relatively flat (see Figure 1).

This report proceeds in four parts. First, we provide a brief history of U.S. higher education financing to illustrate the expanding role of capital markets in higher education. Second, we show that the aggregate costs of institutional borrowing have increased as both private nonprofit and public colleges have taken on ever-greater debts. We note that community colleges in California used this debt to offset state funding cuts. Four-year public and private colleges, on the other hand, used the largest shares of their borrowing to invest in amenities like recreation centers, dining halls, dormitories, and athletics. Third, we show how equity markets capitalized a massive expansion of for-profit colleges and their profits without producing a commensurate number of graduates. Notably, the 15 largest of these corporations received between 66 percent and 94 percent of their revenue from federal student aid programs in 2010. Fourth, we document the rising aggregate interest costs associated with increasing reliance on student loans to households. We conclude by discussing the potential risk of student loan borrowers or colleges becoming unable to afford rising finance costs.

# A BRIEF HISTORY OF HIGHER EDUCATION FINANCING

To understand how colleges use debt and investment capital, it helps to have an overview of the changing ways that America has funded higher education. In 2012, four major sectors enrolled 99 percent of the 16 million full time equivalent students at institutions with degree programs eligible for Title IV federal student aid under the Higher Education Act. Public community colleges enrolled more than four million of these students. Public colleges offering four-year or graduate degrees enrolled over six million student. Four-year private nonprofits enrolled over three million students. For-profits offering two-year, four-year, or graduate degrees enrolled fewer than two million.

Unlike their for-profit and private counterparts, public colleges receive direct appropriations from state and local governments. Since the 1970s however, public colleges have increasingly followed their private college counterparts in seeking additional revenue in exchange for providing capital, goods, and services in multiple markets. [12] These markets include markets for college degree programs, university research, and hospital services.

In turn, colleges have needed capital for new and expanded facilities and programs in order to increase revenue from these various markets. In this section we will first review how public funding fueled the expansion of higher education from 1948 to through 1972. Second, we will discuss how student borrowing began to increase after the expansion of federal student loan programs in the 1970s. Third, we will discuss how tuition [13] and student borrowing increased further since 1990 as public appropriations failed to keep up with enrollment growth. [14] Fourth, we will briefly review how colleges increased revenue in other areas including endowment investments, research, hospitals, and amenities. Finally, we will discuss how bond debt and equity capital have been used to invest in these revenue-generating activities.

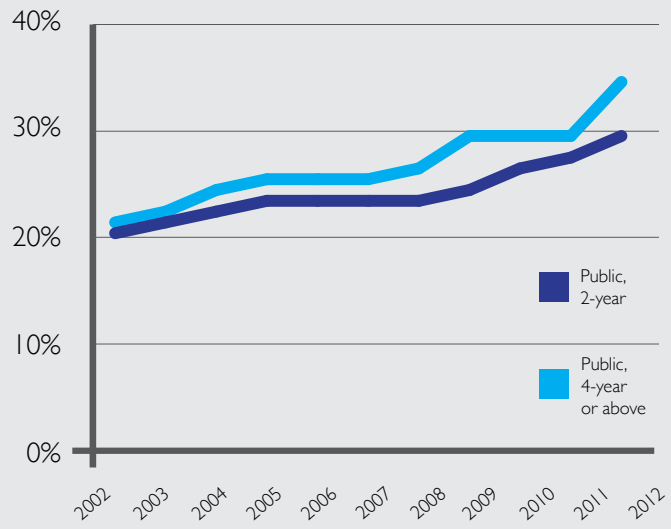
*Public Funding and the Expansion of Higher Education, 1948-1972*

From 1948 to 1972, direct federal government expenditures paid for the two largest waves of college enrollment growth in U.S. history. First, the GI Bill paid for college for millions of World War II veterans who could not have otherwise afforded it. [15] Then, the Higher Education Act of 1965 tripled federal spending on higher education to nearly $34 billion a year by 1968. [16] Most federal funds went to grant aid for needy students. Federal grants paid for students to attend either private or public colleges. Most students, however, went to public colleges for which states also provided funding and offered lower tuition. [17] During these decades of low tuition, needy students could cover much of their tuition, room and board with grant-based aid from

the GI Bill and precursors to Pell Grants. The number of students enrolled quadrupled from 3 to 12 million between 1962 and 1972. [18]

In 1972, the Nixon administration pushed a major reform of the Higher Education Act that expanded grant aid dramatically with the creation of the grant aid program that would become Pell Grants. During the second half of the 1970s, the federal government provided nearly $6 billion to about two million Pell Grant recipients annually (in 2012 constant dollars). [19] The maximum Pell Grant then covered approximately 80 percent of the average cost of college, room, and board at a four-year public college. [20]

**FIGURE 2:** Tuition Revenue as a Percent of Total Revenue




*Source: Integrated Postsecondary Educational Data System*


Pell Grants and grant-based financial aid for needy students continue to provide an important and growing source of revenue for colleges in all sectors of higher education. These grant programs, however, have failed to keep up with the rising cost of college in the decades since. The Obama administration increased Pell funding from $16 billion to $34 billion in 2012 constant dollars between 2008 and 2012. Even after these increases, however, the maximum Pell Grant only covered 31 percent of the average cost of tuition, room, and board at a four-year public college, down from 80 percent in the 1970s. [21]

*The Early Expansion of Student Loans*

The federal government increased student lending in the 1970s to help both low and middle-income students pay for college. Sallie Mae, (originally the Student Loan Marketing Association) was created as a government-sponsored enterprise in 1972 to increase lending. Sallie Mae was privatized in 1997 but remained the largest student lender until recently with help from the Federal Family Education Loan (FFEL) program. Created in 1965 to provide federal subsidies and guarantees for student loans that were originated by private lenders, FFEL expanded with its backing of loans issued by Sallie Mae and other private lenders.

Federal student loans expanded further when the Carter administration signed the Middle Income Student Assistance Act. [22] The Act broadened

*Public colleges have increasingly followed their private college counterparts in seeking additional revenue in exchange for providing capital, goods, and services in multiple markets.*

income-based eligibility to provide Pell Grants to more middle-income students. At the same time, the Act eliminated some income requirements for eligibility for FFEL loans.

In the 1980s, more students turned to loans as grant aid awards and household income failed to keep up with rising costs for tuition, room, and board. Seventy-five percent of federal student aid was given as grant aid in 1972. Grant aid, however, fell to just below 30 percent of federal student aid by 1987, while loan aid grew to 70 percent of federally funded student aid. [23]

*The Growth of Federal Student Loans Since the 1990s*

Student loan borrowing has continued to grow since the 1990s as college costs increased ever further. Net tuition revenue increased from 23 percent in 1987 to 30 percent in 2002 to 47 percent in 2012 as a share of all educational revenue for public colleges. [24] By 2002, net tuition revenue made up 21 percent of all revenue at four-year public institutions, excluding stand-alone law schools and institutions with medical schools. [25] Net tuition increased to 34 percent of all revenue for these institutions in 2012 (see Figure 2).

The federal government expanded tax deductions and grant programs to help with college costs. None of these initiatives, however, were enough to stem the growth of student debt. Clinton administration tax deductions, for example, went disproportionately to higher income families that receive no grant aid and pay for college largely out of pocket. [26] So as colleges continued to increase tuition and federal student loan eligibility was further expanded, federally backed student loan programs grew ever faster throughout the 1990s and into the last decade across all sectors of higher education.

*Investment, Hospital, Research, and Amenities Revenue*

The effects of reduced governmental funding — and institutions' responses to this change — have been felt unevenly across the higher education system. Elite colleges and research universities have been able to respond to the new environment by diversifying their revenue sources. Research universities, especially those with programs in the medical sciences, have grown their revenue from federal research grants and from providing hospital services. [27] Increasing research and hospital service revenue, however, can require large

*An increasing share of families' higher education expenditures went to interest on student loans across the higher education system as a whole.*

investments in capital-intensive facilities. Further, scholars have found that, despite perceptions to the contrary, increased research activities actually increase costs more than they increase revenue – and at the expense of lower instructional resources and higher tuition rates. [28]

Wealthy institutions have also been able to generate increasing but volatile investment income from endowments. Both public and private universities saw investment revenue increase from 2002 through 2007, a year in which they together earned $78 billion from financial investments. [29] Investment income provided 31 percent of all revenue for private, four-year colleges that year. In contrast, however, private colleges had $69 billion in negative investment income when the financial crisis peaked in 2009.

Revenue from fees charged for amenities like recreation centers, student unions, dining halls, dorms and college athletic programs have increased more broadly across all sectors. [30] Revenue from all student fees increased fastest at community colleges from 2000 to 2013, growing by 117 precent. Fee revenue increased by 81 percent at four-year public colleges and by 61 percent at four-year private colleges. With fewer revenue raising options, community colleges, regional colleges, and for-profits have likewise relied more heavily on increasing tuition revenues funded from household savings, student loans, tax deductions, and federal grant programs.

**Both private and public colleges dramatically increased their borrowing for capital projects between 2002 and 2012.**

*Capital Strategies and Revenue Strategies*

As we have seen, new forms of revenue have become available to higher education institutions. While these new potential revenue streams vary by types of institutions, so do the forms and costs of capital available to invest in building these revenue streams.

Summarizing what we have discussed thus far, Table 1 outlines 1) types of capital available to colleges in each sector, 2) the revenue generating activities that they can capitalize, and 3) the revenue sources that can be tapped with those activities. The forms of capital available to colleges and universities have expanded with innovations in financial instruments. Private and public colleges in the past more commonly issued municipal bonds that would be repaid using only tax revenue or revenue from a particular project like a dormitory. Investment banking houses like JP Morgan and Barclays today have helped some higher education institutions to issue general revenue bonds that collateralize all college revenue in exchange for lower interest

rates. Such bonds pledge state appropriations, project revenue, and even future tuition increases if necessary to repay bonds. Other institutions have gone a step further, adding variable rate bonds to their debt mix. Other institutions still, from Harvard to the Peralta Community College district have securitized these variable rate bond offerings with derivatives known as interest rate swaps. [31] For-profit institutions, on the other hand can turn to corporate bonds, stock offerings, and private equity capital.

In the sections that follow, we will provide estimates for the costs to the higher education system of using capital from private bond and equity markets for colleges' investments in revenue generating activities. Both private and public colleges dramatically increased their borrowing for capital projects between 2002 and 2012.

Borrowing cost increases were far more widespread in the public four-year sector than in the private four-year and community college sectors. For profit colleges likewise boosted their profits to please equity investors. As tuition increased along with these costs, an increasing share of families' higher education expenditures went to interest on student loans across the higher education system as a whole.

*The 15 largest for-profits received between 66% and 94% of their revenue from the federal government.*

**TABLE 1:** Revenue Generating Activities, Revenue Alternatives to State Appropriations and Capital Sources by Sector

| SECTOR 2012 STATISTICS | ACTIVITIES | POTENTIAL REVENUE SOURCES | PRIMARY CAPITAL SOURCES |
|---|---|---|---|
| Community colleges:<br>• 819 institutions<br>• 4,222,308 FTE enrollment | • Increased enrollment<br>• Increased tuition and fee rates | • Federal and state student grant aid<br>• Student loans<br>• Household spending<br>• State appropriations | • Municipal bonds |
| Public four-year:<br>• 331 institutions<br>• 6,475,852 FTE enrollment | • Fee-based amenities,<br>• Increased enrollment<br>• Increased tuition rates<br>• Out-of-state enrollment | • Federal and state student grant aid<br>• Student loans<br>• Household spending<br>• State appropriations | • Municipal bonds |
| Private nonprofit four-year:<br>• 1,641 institutions<br>• 3,348,867 FTE enrollment | • Fee-based amenities,<br>• Increased enrollment<br>• Increased tuition rates | • Federal and state student grant aid<br>• Student loans<br>• Household spending | • Municipal bonds |
| Research universities (public and private – institution and enrollment counts included in 4-year college counts). | • Medical and bio science research<br>• Hospital services | • Federal and private research funding<br>• Health insurers, consumers, and government programs | • Municipal bonds |
| For-profits:<br>• 1,320 institutions<br>• 1,549,761 FTE enrollment | • Increased enrollment<br>• Increased tuition and fee rates | • Federal and state student grant aid<br>• Student loans<br>• Household spending | • Corporate bonds, stock offerings<br>• Equity investments |

# THE COSTS OF COLLEGES' INSTITUTIONAL BORROWING

*Like their students, many higher education institutions also have a growing debt problem.*

Since 2002, public and private nonprofit colleges and universities have taken on increasing amounts of debt, particularly in the form of municipal bonds. In the past decade, interest payments on these debts have nearly doubled from $6 billion in 2002 to $11 billion in 2012. Spending *per student* began rising rapidly in 2005 at community college, private nonprofit four-years, and public four-years alike. That growth remained strong through 2012 (see Figure 3). Like their students, many higher education institutions also have a growing debt problem.

Public and private nonprofit colleges that need capital the most have the hardest time borrowing. Underresourced colleges need capital for investments to manage their expanded enrollment and improve graduation rates. But they cannot afford the higher debt levels taken on by the most elite colleges. With large revenues from tuition, research, hospitals, and endowment investments, these institutions appear able to afford larger debt levels. But the largest share of their borrowing has paid for amenities, and these institutions enroll only a fraction of U.S. college students.

Still, even less prestigious public colleges have increased their capital market activities to meet those of private colleges. As a result, it is public colleges that have had the largest average increases in institutional debt levels per student — often increasing at much faster rates than either revenue or enrollment. And at both public and private four-year institutions, the largest share of their borrowing costs were for investments in amenities like recreations centers, dining halls, and athletics.

*Colleges and universities also have a debt problem*

Municipal bonds are the primary instrument by which public and private nonprofit colleges issue debt. The debts customarily go to finance capital improvements such as classroom construction, new dormitories, and physical plant maintenance. Higher education bonds may be issued by states, by local governments, or — in an increasing number of cases — by higher education institutions themselves. When states issue bonds for public higher education investments — often for academic buildings — the debt is typically paid out of state coffers and does not appear on a college's books or reports to the Department of Education. At this time, we lack comprehensive national data for how state issuance of higher education bond debt has changed. We do know, however, that since 2002 public colleges have increasingly issued debt themselves.[32] We further know that the largest share of interest payments at public and private four-year colleges was from borrowing for amenities investments. Interest spending at community colleges, however, is more weighted towards debts for instructional investments and borrowing to make up for

*Public college and university debt has nearly tripled over the last decade.*

state funding cuts. Such debt may be secured in a bond offering by pledges ranging from the full faith and credit of the issuing entity to more limited pledges of state or local appropriations, *ad valorem* property taxes, or revenues from projects built using proceeds from the bond.

Public college and university debt has nearly tripled from $54 billion to $151 billion over the last decade.[33] Comparable historical numbers are not available from private non-profit colleges and universities. Data on debt for nonprofits is only available beginning in 2010. In 2012 their debt amounted to an additional $95 billion.[34] At the same time, tight state and local budgeting has meant that the total issuance of municipal bonds has remained flat at about $500 billion a year, much of it refinancing of existing debt.[35] In other words, higher education bond issuance has also grown as a share of overall municipal bond issuance.

The increases in spending on interest cannot be explained by increases in either the cost of borrowing from capital markets or the provision of education to a growing number of students. According to all available measures, total interest payments have increased even as interest rates have fallen — even though they have not fallen nearly as far as the cost of credit for banks as represented by the 30-year Treasury bond yield rate. Further, the growth of college and university debt has far outpaced growth in enrollments across all sectors.

The growth of debt financing costs has been rapid for both private and public institutions but especially at community colleges and four-year public colleges (see Figure 3). Interest spending per student tends to be highest at law schools and medical schools with few or no undergraduates. We provide data here for institutions excluding law, medical, and specialty-only schools, however, to show debt costs have expanded even at institutions that enroll undergraduates. Annual spending on interest payments per enrolled student nearly doubled at public four-year colleges from

**TABLE 2:** Interest Spending Per Student for Institutional Debt By Sector and Percentile in 2012

| PERCENTILE | COMMUNITY COLLEGE | PUBLIC FOUR-YEAR | PRIVATE NONPROFIT FOUR-YEAR |
|---|---|---|---|
| NUMBER OF COLLEGES: | 526 | 282 | 1010 |
| 25th | $35 | $214 | $319 |
| 50th | $146 | $428 | $647 |
| 75th | $395 | $737 | $1,116 |
| 90th | $839 | $1,160 | $2,076 |
| 95h | $1,193 | $1,431 | $2,956 |

*Source: Author calculations using data from IPEDS. *This table excludes medical, law, and specialty only institutions.*

$488 in 2002 to $909 in 2012. Interest costs per enrolled student at community colleges increased to 273 percent of their 2002 level, from $166 to $452. [36] Interest costs for private four-year colleges increased to 161 percent of their 2002 level from $990 to $1,589.

While the increases across the sectors are large, they have not affected all institutions. There is a broad distribution in how much colleges spend per student on debt costs even within each sector (see Table 2). The median level of interest spending for community colleges in 2012 was just $146 per student. Meanwhile community colleges in the 95th percentile spent $1,193 per enrolled student — more than eight times as much as those states at the 50th percentile. Likewise, private institutions in the 95th percentile spent $2,956 – nearly five times as much on interest for institutional debts as private colleges at the median. Public four-year institutions and systems at the 95th percentile spent $1,431 per enrolled student or more than three times as much as those schools at the median.

The distribution of the change in interest costs also varied substantially within the three sectors. Table 3 provides the percent change in interest cost per enrolled student from 2002 to 2012 for each sector by percentile for all institutions that reported adequate data. The figures for the 25th percentile represents the percent change and real change for institutions whose increases were greater than only 25 percent of the other institutions.

In the subsections that follow, we discuss the distribution of the change in interest spending for each sector excluding medical, law, and specialty only institutions. The increase in community college debt was concentrated in nine U.S. states and territories where community colleges' institutional debts increased by 84 percent or more. Institutional debt increases at four-year public colleges and four-year private colleges were more widely spread across each sector.

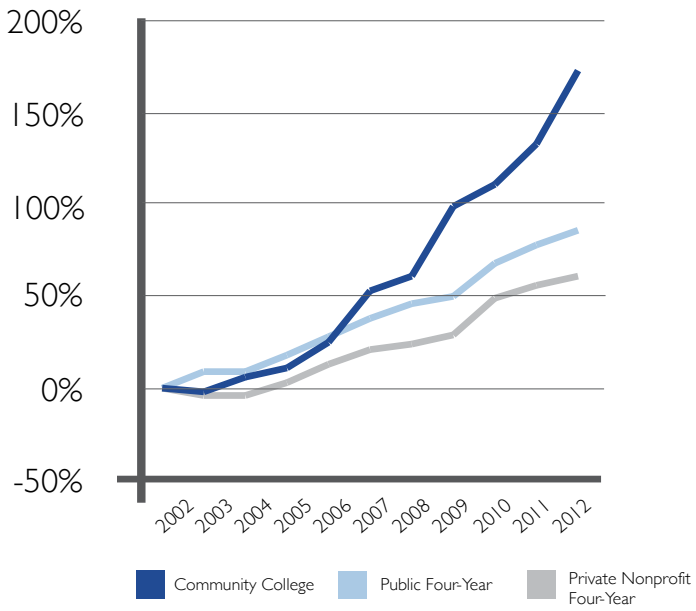
*Institutional Debt Increases at Four-year Public Colleges and Universities*

Median interest spending has grown at a faster rate at non-specialty public four-year colleges and college systems than at private

or community colleges. Of 308 such institutions (excluding medical, law, and specialty-only schools), 232 reported data on interest spending for both 2002 and 2012. The mean increase in spending *per student* on interest costs at these schools was 68 percent while the median was 54 percent. These cost increases matter for a broad swath of U.S. students. Colleges above the median for increases in per student interest costs enrolled more than 3.2 million students by 2012.

Significant institutional borrowing costs are new for the majority of the non-specialty public colleges that reported the highest percentage increase in interest spending. In 2002, the mean and the average for spending on interest for such colleges was just one percent. By 2012, both the mean and the median had doubled to two percent. Likewise, the 12 institutions above the 95th percentile for percentage increases in interest spending spent less than $100 per student and less than 0.5 percent of their revenue on interest payments in 2002. After interest spending increases of 844 percent or more from 2002 to 2012, all of these institutions from the University of Georgia System to the Vermont State College System,

**FIGURE 3:** Cumulative Percent Increase in Institutional Interest Costs Per Enrolled Student By Sector Since 2002 in 2012 Constant Dollars

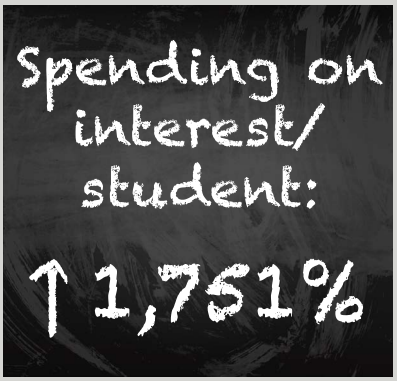



*Source: Author calculations using data from IPEDS.*

**TABLE 3:** Percent Change in Institutional Debt Costs Per Student By Sector and Percentile from 2002 to 2012

| | COMMUNITY COLLEGE | PUBLIC FOUR-YEAR | PRIVATE NONPROFIT FOUR-YEAR |
|---|---|---|---|
| NUMBER OF COLLEGES: | 207 | 232 | 889 |
| | PERCENT CHANGE | PERCENT CHANGE | PERCENT CHANGE |
| PERCENTILE 25th | -65% | -10% | -34% |
| 50th | -1% | 54% | 8% |
| 75th | 186% | 166% | 89% |
| 90th | 790% | 425% | 295% |
| 95h | 1,676% | 844% | 561% |

*Source: Author calculations using data from IPEDS. *This table excludes medical, law, and specialty only institutions.*




In California, community college spending on interest per student increased by 1,751% from 2002 to 2012.

spent between two percent and four percent of their revenue on interest and between $250 and $950 per student.

The colleges and systems in the 95th percentile for their percentage increase in per student spending on interest tended to already have above average interest spending per student in 2002. The median for their interest spending per student in 2002 was $546. The mean for their interest spending in 2002 was $701 per student. Except for the University of California system, which already spent $1,790 per student on interest in 2002, these colleges and systems increased interest spending from between 116 percent at Rowan University and 447 percent at the University of Oklahoma system. So by 2012, the group's median for spending reached $1,640 per student and the mean for the group's spending was $1,880 per student.

*Community College Institutional Debt Costs*

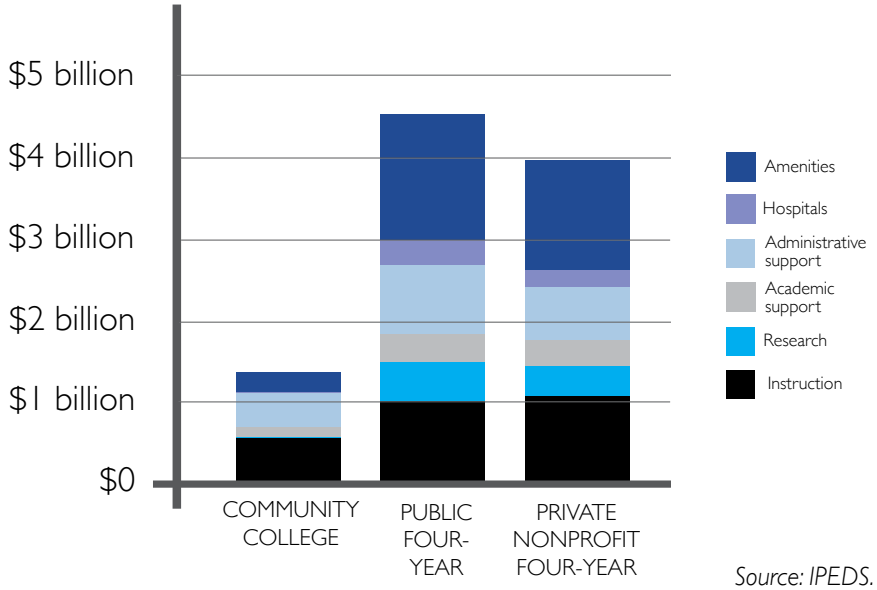
Unlike interest costs at four-year public colleges, interest cost increases for community colleges are concentrated in nine U.S. states where community colleges reported adequate data. Of the 819 two-year only public community colleges, 526 reported data on interest spending for institutional debts in 2012. [57] Just 207 community colleges reported the interest spending data needed for 2002 to estimate the change in interest spending per student since that year. Moreover, zero community colleges reported adequate data in 16 of 50 U.S. states. [58] Average community college interest spending per student actually declined by eight percent or more in 17 of the 34 states where community colleges reported adequate data. Meanwhile, the median change was an increase of just one percent for all community colleges reporting data.

Increases in interest spending at community colleges were massive, however, in nine states. The states are California, Georgia, Indiana, Maryland, Michigan, North Carolina, New Jersey, Ohio, and West Virginia. Together, their community colleges enrolled more than 1.5 million full time equivalent students. Most of these states' community colleges were in the 75th percentile or above for their increase in interest spending per student. Interest spending per student increased by 186 percent or more at the schools in the 75th percentile or above.

Further research is needed to determine the extent to which the increase in debt costs in these states involved borrowing to offset state funding cuts rather than conventional municipal bond borrowing for capital projects. This was the case in California where community college spending on interest per student increased by 1,751 percent per student from $56 to $1,043. This increase in California's community college debt occurred through California's deferred payment program to balance the state budget.

Under the deferred payment program, California reduced annual payments to community colleges. [59] Colleges, however, were promised

**FIGURE 4:** Total Spending on Interest by Purpose of Debt, 2012




*Source: IPEDS.*

that they would receive additional payments later in order to meet the state's constitutional funding requirements. Colleges could then borrow from private credit markets the funds that the state owed them. The state committed to pay interest on the funds owed to colleges so that they could then pay interest owed to creditors. But the state interest payments, of course, will deplete revenues that could otherwise have gone to regular community college funding.

*Private NonProfit Spending on Institutional Debt Costs*

Average interest spending per student began much higher at private, nonprofit colleges and has also increased. This is in large part, however, because private colleges in the higher percentiles for interest spending increased their interest spending by much more than the bottom 50 percent of colleges. The bottom 50 percent increased their interest spending per student by no more than eight percent (see Table 3). Among the 890 out of 1,152 private colleges reporting interest data (excluding medical, law, and specialty colleges), colleges above the 75th percentile increased interest spending per student by 89 percent or more. Colleges at the median or below increased interest spending by less than eight percent or decreased interest spending. The 223 colleges at the 75th percentile range from four of the eight Ivy League colleges to small liberal arts colleges. All together, these colleges in the 75th percentile or above enrolled just 583,682 students in 2012, much less than the 1.5 million students at community colleges with large increases in interest rate spending or the 3.2 million students at public institutions with large increases in interest spending.


*Financial losses on UC Berkeley's new Memorial Stadium increase the odds that UC will use tuition and tax dollars to pay off the bonds.*

*Photo: Daniel Miller, flickr.com/mystandardbreakfromlife*

*What Are Colleges Borrowing For?*

This report provides the first systematic analysis of how colleges are borrowing more for amenities than instruction or any other functional area. Figure 4 breaks down interest payments in 2012 according to the type of investment being funded. At four-year public colleges and universities, more than half of all interest spending is for capital investments in "student services" and "auxiliary services" — the two Department of Education categories for reporting amenities spending on facilities like dormitories, cafeterias, stadiums, and recreation centers. This trend does not hold at community colleges, but across all three sectors, only about a quarter of all interest payments are for investments in classroom construction and other instruction projects.

Scholars have found that colleges have expanded amenities since at least 1992 to attract more students willing to pay higher tuition and fees. [40] In 2003, Clare Cotton, president of the Association of Independent Colleges and Universities in Massachusetts at the time, told the *New York Times,* "It's exactly the psychology of an arms race. From the outside it seems totally crazy, but from the inside it feels necessary and compelling." [41]

*Discussion*

Capital investments in non-instructional areas do not just create new costs for servicing debts. Additional spending is also needed to operate new facilities, whether they are for instruction, recreation, or administrative management. We can see this particularly at four-year public colleges. From 2002 to 2012, spending per student for facilities and auxiliary services increased

by 20 percent from $1,704 to $2,134 per student. Spending on instruction decreased by one percent per student.

Capital investments in dormitories, student centers, athletic complexes, and hospitals do produce future sources of revenues and even profits for colleges and universities. For this reason they are generally expected to pay for themselves. But their costs nevertheless often fall on students. Investments in new dormitories, dining halls, and recreation centers are paid for by the fees these facilities generate from students. The costs of room and board fall directly on students and for many are paid directly out of student loans.

When capital investments do not pay for themselves, tax and tuition payers can be left on the hook. Since 2002 public college and university systems such as the University of California have increasingly secured new bond issues by using pledges of all available institutional revenues, including tax dollars and tuition proceeds should project revenues prove to be insufficient.[42] Under these indenture agreements, called general revenue bonds, if a university cannot secure sufficient revenue from dormitory, dining hall or recreation center fees, it is required by bond contracts to increase revenues elsewhere.

Financial losses on University of California at Berkeley's new Memorial Stadium provide a high-profile example of bond agreements requiring tax and tuition payers to cover payments on excessive debts for amenities. The UC Board of Regents, which governs the UC system, planned to pay off $445 million in bonds for the stadium by selling the rights for 2,900 luxury seats for up to 50 years.[43] In June of 2013, however, UC officials acknowledged that sales of these rights had fallen $120 million short of their targets, increasing the odds that UC will use other revenue like tuition and tax dollars to pay off the bonds.

On the other hand, bond markets can reward behaviors that generate greater revenue but are at odds with the goals of public higher education. Bond investors are willing to accept the lowest interest rates from the safest prospects for investment and not necessarily from colleges and universities most capable of fulfilling their core missions. Moody's ratings methodology, for example, accounts for a higher education institution's "pricing power" in terms of high student demand and statutory flexibility to increase tuition, its "operational performance" in terms of the diversity of its revenue streams and control over expenditures on faculty, and its "capital investment" in facilities that draw in additional revenues. It also encourages colleges and universities to offer security provisions for bondholders that provide the broadest possible revenue pledges.[44] By these mechanisms, the increasing costs of borrowing have been passed on to tax and tuition payers even when the borrowing is not for educational priorities.

*Bond markets can reward behaviors that generate greater revenue but are at odds with the goals of public higher education.*

# WALL STREET PROFITS ON FOR-PROFIT COLLEGES

We lack comparable data for corporate debt issuance by for-profit colleges. We can measure, however, the for-profit sector's use of a different type of financing: equity capital from investors. Massive infusions of capital from stockholders and private equity firms fueled a radical expansion of enrollment and revenues at for-profits from 2002 to 2012. In return for providing equity capital, investors expect to receive profits in the form of dividends and capital gains. The profits generated by these institutions can be thought of as another type of financing cost: They represent the cost to students and taxpayers of relying on Wall Street equity to finance the expansion of higher education (readers should bear in mind that over 80 percent of the revenues at for-profits come from federal student aid programs).

Department of Education rules dictate that as a condition of eligibility to receive federal student aid funds, institutions may generate no more than 90 percent of their total revenues from these funds. This is known as the 90/10 rule. As Pell Grant funding increased from $16 billion in 2008 to $34 billion in 2012,[45] for-profits worked hard to remain as close as possible to that maximum. For-profits enrolled just 10 percent of all students in two year and above degree institutions in 2010. The share of Pell Grant funds going to students at for-profits, however, increased from 14 percent in 2002 to 25 percent in 2010.[46] In its first year in 2010, the Post 9/11 GI Bill awarded nearly $2 billion in aid, 35 percent of it to for-profit schools that enrolled just 23 percent of GI Bill beneficiaries (funds for military veteran programs do not count toward the 90/10 rule).[47] When federal student loan aid is included with military and Pell aid, the 15 largest for-profits – all capitalized by equity markets – received between 66 percent and 94 percent of their revenue from the federal government.[48]

Below we estimate the costs of financing higher education with investors' equity by charting annual net operating profits among those institutions owned by publicly-traded and private-equity firms. In doing so, we will show how equity capital fueled for-profit increases in revenue from federal aid programs and gained large profits in the process. First we provide a brief background on the for-profit sector.

*The Growth of For-Profit Higher Education*

Since the 1990s, for profit colleges and universities have been the fastest growing type of higher education institution and the fastest-growing site of student loan origination. Between 2002 and 2012, enrollments at for-profit institutions expanded by 163 percent.[49] In comparison, enrollment grew only 27 percent for higher education as a whole.

As the industry has grown, it has faced a rising chorus of public criticism and regulatory scrutiny. This comes in the wake of mounting evidence of predatory recruiting

practices, low graduation rates, outsized student debt burdens, and poor labor market outcomes for those who do finish. [50] In 2012, the Senate Committee on Health, Education, Labor, and Pensions published a well-researched and thoroughly documented, 1000 page report on the industry. [51] The report revealed evidence to support critics' longstanding contention that for-profits entice students (particularly low-income students) with low upfront costs while offering little instructional support, thereby saddling them with large debts and few marketable skills. These findings bolstered the Obama administration's initiatives to ban recruitment incentive compensation and implement "gainful employment" rules for institutions that accept federal student aid dollars. As of the publication date of this report, the details of these new regulatory rules are still being contested. [52]

Although important, an overarching review of the organizational practices and educational outcomes of for-profit colleges is outside the scope of this report. Our goal instead is to document how the growth of the for-profit machine has factored into the broader growth of finance costs over the past decade. As we show below, Wall Street was the primary financier and beneficiary of the for-profit boom.

*Wall Street and the For-Profit College Boom*

For-profit colleges have increasingly used equity capital from stock investors and private equity to finance their expansion. They found enthusiastic investors in both of these capital markets. Small, privately-owned for-profit colleges long filled a niche role within the higher education landscape. Traditionally these firms specialized in one or two-year technical and vocational-training programs, and were usually owned and operated locally. In 1990 there was not a single publicly traded higher education firm.

*For-profits entice students (particularly low-income students) with low upfront costs while offering little instructional support, thereby saddling them with large debts and few marketable skills.*

During the 1990s, however, a combination of increasing demand for college degrees and sizable government subsidies attracted growing interest from Wall Street. The Apollo Group, which owns the University of Phoenix, first went public in 1991, followed by DeVry in 1994 and Educational Management Corporation in 1996. Soon, corporate holding companies and private equity firms began muscling into the higher education sector through acquisitions of small private nonprofit and for-profit schools. They rapidly reshaped this formerly small niche of higher education into a major finan-

cial profit machine. By 2011, colleges owned by publicly-traded or private-equity firms together accounted for over 75 percent of enrollments at for-profits, and over 10 percent of all higher education students nationwide. Through this process, Wall Street has burrowed into higher education – not only as creditors to households and colleges, but also as equity investors.

The financial takeover hastened a reorientation of for-profits toward a scale-based business model. In order to maximize investor returns, firms sought to corral ever-greater numbers of tuition-payers through their doors (or online portals) while maintaining minimal marginal costs. As illustrated in the Senate HELP Committee report, the case of Education Management Corporation (EDMC) is helpful in understanding this transition. EDMC was founded in 1962, and had long been reputed as one of the higher quality for-profits in an industry plagued by questionable practices. In 2006, EDMC was taken over by a private equity consortium led by Goldman Sachs along with Providence Capital Partners and Leeds Capital. Goldman and its partners installed new executives who promptly reallocated resources from instruction to marketing and recruitment. Total enrollment across EDMC's brands, which include Argosy University, South University, Brown Mackie College, and the Arts Institutes, more than doubled between 2006 and 2010. By 2011, colleges in which Goldman Sachs was the dominant owner enrolled over 150,000 students, captured over $486 million in federal Pell Grant funds, and netted an operating profit of over $501 million.[53] However, these financial successes were not mirrored in students' outcomes: among those students enrolled in 2008, over 62 percent had withdrawn two years later without completing a degree.[54] Yet two of EDMC's Art Institute campuses were among the 10 for-profit colleges that that issued

*By 2011, colleges owned by Goldman Sachs enrolled over 150,000 students, captured over $486 million in federal Pell Grant funds, and netted an operating profit of over $501 million.*

more than $25,000 in student loans per enrolled student in 2012.

In other cases, investors have acquired nonprofit institutions, converting them to for-profit businesses, and used them as launching pads to create for-profit brands. In 2004, the trustees of a fledgling Southern Baptist school, Grand Canyon University, sold their institution to a California-based venture capital firm called Significant Ventures LLC. Significant converted Grand Canyon into a for-profit school, making it the first for-profit Christian university. By leveraging the school's existing regional accreditation, sixty-year history, and religious bona fides in its marketing strategy, Grand Canyon's managers achieved an enrollment expansion of over 1000 percent between 2002 and 2012. Grand Canyon's growth was due almost entirely to online programs. Grand Canyon made an initial public offering in 2008, and continues to trade on the NASDAQ exchange.

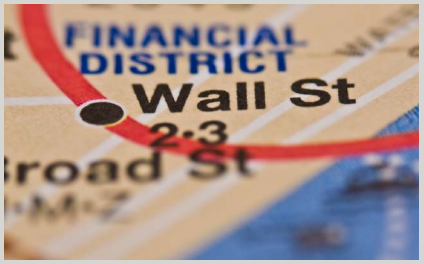
*The Cost of Using Equity Capital*

To what extent has the spectacular (and publicly-subsidized) growth of for-profits functioned as a channel to convert educational expenditures into financial profits? Below we estimate the cost of using equity capital to finance higher education institutions by charting annual net operating profits among those institutions owned by publicly-traded and private-equity firms. Our analysis covers the ten-year period from 2002 to 2012.

Operating profit is a commonly used metric of corporate profitability, and a useful gauge of the financial costs of using equity capital. It denotes revenues from operations after subtracting the costs of providing services (i.e. instructional spending), as well as general administrative/overhead costs, depreciation/amortization, and marketing costs. It thus captures the difference between household and government expenditures on education on the one hand, and the costs incurred by the firms providing it (even allowing for the arguably excessive amounts that for-profits tend to spend on marketing and recruiting).[55] In order to maintain high stock share prices and private equity investments, companies must maintain satisfactory operating profit levels.

*Some of the worst declines in graduation rates occurred at institutions with public stock offerings or ownership by private equity.*

The aggregate figures reported below represent the sum of firm-level figures for fifteen publicly traded higher education companies,[56] as well as 56 colleges owned by private equity firms. For publicly traded firms, we acquired annual figures on operating profits from the income sheets of their fiscal year-end 10-K statements filed with the FEC. Since companies owned by private equity firms do not report income statements, we calculated comparable figures for them using revenue and expendi-




*Wall Street has burrowed into higher education — not only as creditors to households and colleges, but also as equity investors.*

*The takeover of the for-profit sector by investors has seen the principles and techniques of "shareholder value maximization" imported wholesale into a major segment of American higher education.*

ture figures that they submit to the Department of Education.[57] We acquired this data from the Integrated Postsecondary Educational Data System (IPEDS).[58]

Figure 5 shows the for-profit net annual operating profits from 2002 to 2012, expressed in constant (base 2012) dollars. Over the decade from 2002 to 2012, the size of annual net operating profits increased by 496 percent (adjusting for inflation) before collapsing in 2012 as enrollments failed to keep pace with expanded capacity. At its peak in 2010, the amount of higher education expenditures channeled into profits for public stock and private equity-owned companies reached $4 billion dollars.

*Discussion*

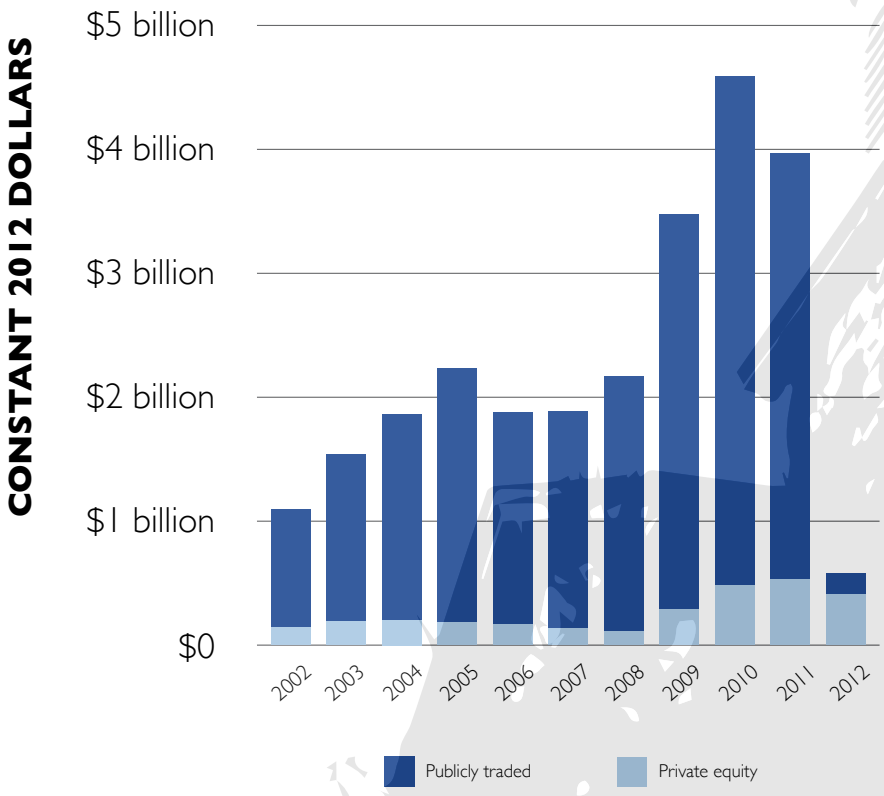
The takeover of the for-profit sector by investors has seen the principles and techniques of "shareholder value maximization" imported wholesale into a major segment of American higher education. This finance-driven model is very efficient at increasing enrollment and generating profits. It has a poor track record, however, when it comes to helping students successfully graduate and preparing them for a competitive labor market. Indeed, graduation rates for all four-year for-profit colleges for cohorts beginning six years earlier fell from 46 percent in 2002[59] to just 28 percent in 2012.[60] Graduation rates are far better at two-year for-profits. Students at such institutions, however, are still less likely to get jobs than students at comparable public institutions.[61] Student loan default rates for these students are also poor.[62]

The basic inefficiency of the investor-driven model is also evident in the billions of dollars that it directs to financial profits rather than to educational investments. Here it is worth highlighting another instructive metric: gross profit margins. Business analysts consider high gross margins to be indicative of a situation where prices bear little relation to the costs of providing services. Specifically, gross profit margins represent the percentage of total sales leftover after accounting for direct costs of providing a good or service. In other words, how much money does a firm squeeze from each dollar of sales? An analysis of income data reveals that the for-profit college industry is characterized by very high margins: gross margins among the publicly traded firms in this study averaged approximately 55 percent during the period under study.[63] This is significantly higher than the 33 percent average gross margin across 99 major industries in the U.S. (standard deviation: 14 percent; median: 31 percent).[64]

High gross margins among for-profit colleges are indicative of the fact that they tend to spend comparatively little on instruction per student. High margins also reflect the symbiotic relationship between for-profit colleges and student lending. The fact that these institutions can leverage the easy availability of student loan credit *and* federal student aid funds

has allowed them to set prices far above the costs of the educational services they provide. Of course student debt-funded "cash-cow" programs also occur in the nonprofit sector, particularly for masters degree programs. But the for-profit sector is unique in utilizing it as a standard business model for undergraduate four- and two-year programs. Students shoulder the burden of these profits in the form of unaffordable loan debts and taxpayers lose the substantial benefit that should accrue from the investment of federal aid funds.

**FIGURE 5:** Operating Profits Among For-Profit Colleges and Universities, 2002-2012




*Source: Author calculations using data from IPEDS income sheets for publicly traded for-profit colleges.*

# THE COST OF STUDENT LOAN INTEREST PAYMENTS

The massive increase in student lending has provided families with the money needed to pay the rising cost of tuition, room, and board. As a result, however, families are not just paying more for tuition, room, and board. They are also paying more in interest on student loans. We estimate that families paid $34 billion in interest on student loans in 2012. This is 127 percent higher than the $15 billion (in 2012 dollars) that we estimate families spent on interest just a decade earlier in 2002.

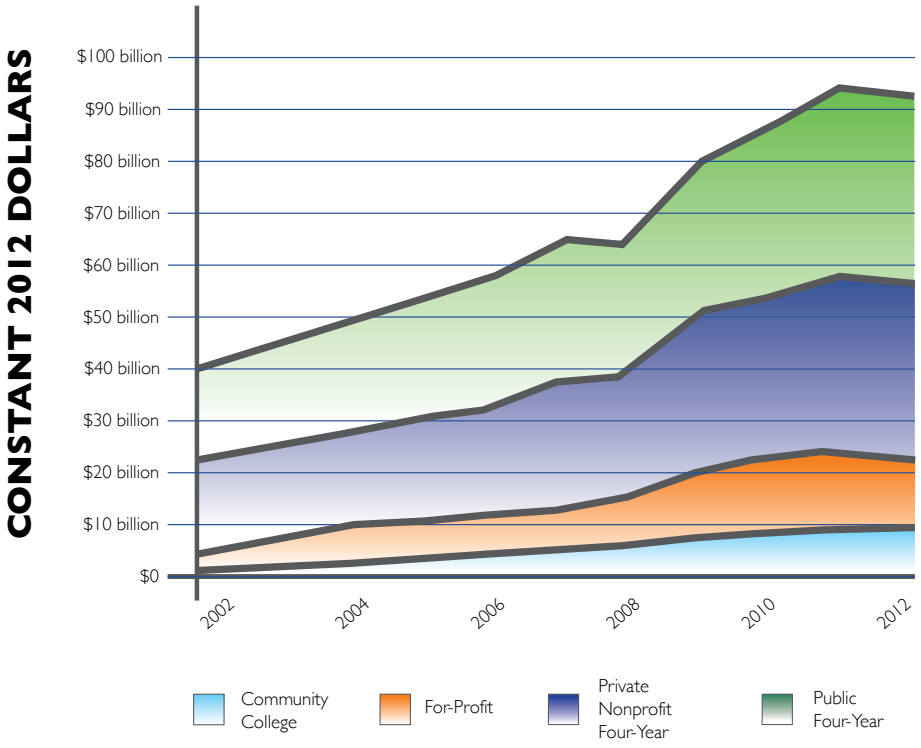
The overall increase in the origination of student loans has been most important to increasing student loan interest costs. The federal government overtook Sallie Mae as the nation's largest lender after Congress eliminated the FFEL Program in 2010. FFEL opponents successfully argued that it was more affordable for the government to directly issue loans to students. [65] Since the elimination of FFEL, federal direct lending has grown to $617 billion in currently outstanding loan debt. As a result, the Congressional Budget Office estimated that the net present value earnings potential was approximately $51 billion for federal student loans issued in 2013 alone. [66]

Though origination of new FFEL loans has been eliminated, the federal government still pays to guarantee another $423 billion in currently outstanding FFEL loan debt. The federal guarantees insure the private funders of those loans against losses from defaults and delinquencies, thus subsidizing private financial sector profits from those loans. These federal loan programs dwarf private student loans, which have an outstanding balance of approximately $150 million. [67]

*Estimating Student Loan Interest Payments*

The size of total student loan interest payments is a function of three factors: 1) the number of families with outstanding student loans, 2) the amount each family borrows, and 3) the interest rates that families pay. Each of these factors has contributed to a rapid increase in the student loan interest payments across the higher education system as a whole since 2002.

**FIGURE 6:** Annual Student Loan Origination by Sector, 2002-2012




*Source: Author calculations using National Student Loan Data System data.*

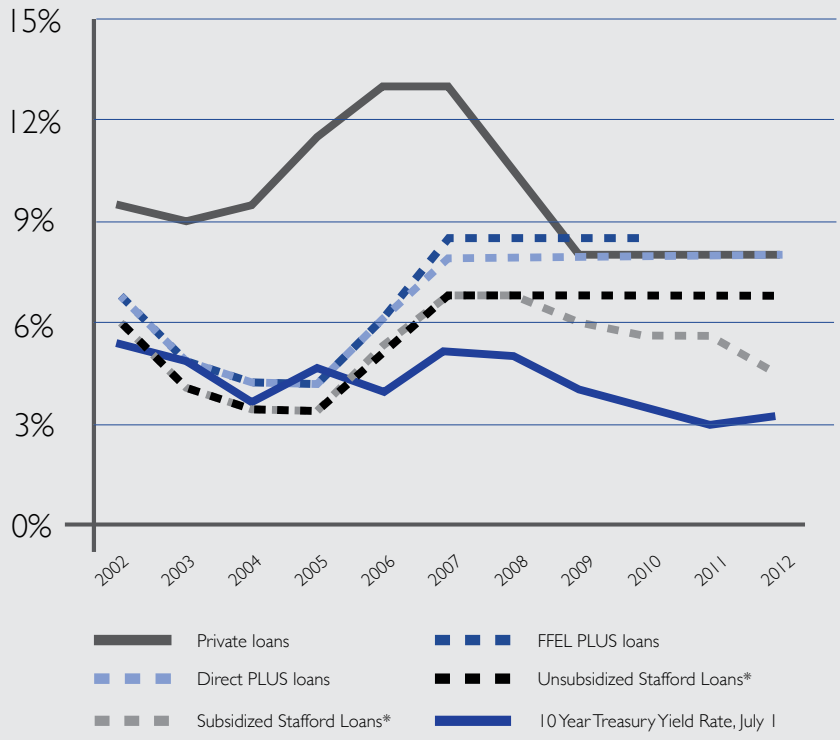

*Nearly $1.3 billion in federal student loans were originated in 2012 just for the 39,482 students at the top 10 for-profit colleges for loan origination.*

As college costs increased, more and more families turned to student loans from 2002 to 2012. The percentage of new graduates with four-year degrees with student debt increased from 62 percent in 2001 to 66 percent in 2009, the years closest to our period of analysis for which the National Postsecondary Student Aid Study has published survey data.[68] The share of graduates with debt increased from 59 percent to 62 percent at public institutions, from 65 percent to 69 percent at private non-profit schools, and from 79 percent to 91 percent at for-profits.

The average debt for those students that borrowed increased even more dramatically. Average debt nearly doubled from $9,437 in 2001 to $21,110 in 2009 for public college graduates with debt. Debt for private nonprofit graduates also more than doubled from $13,650 to $21,113. Debt for graduates of for-profits increased from $19,220 to $36,536. Accordingly, the origination of new student loan debt increased dramatically across all sectors.[69] This is shown in Figure 6.

Interest rate changes also contributed to the increase in student loan interest payments from 2002 to 2012. Our analysis includes all federal loans and non-federal loans except for federal Perkins loans.[70] Interest rates for these loans changed considerably from 2002 to 2012 among cohorts of borrowers who were entering repayment for the first time. From 2002 to 2003, rates fell across all loan types for all borrowers with outstanding balances, including new cohorts entering repayment, because most borrowers at that time had variable rate loans (see Figure 7). Then, from 2005 to 2007, interest rates increased quickly across all loan types, again for all borrowers.

**FIGURE 7:** Interest Rate for Cohorts Entering Repayment By Loan Type, 2002-2012




*Source: Interest rates are from FinAid.org at http://www.finaid.org/loans/historicalrates.phtml. 10 Year Treasury Yield Rate is from the U.S. Department of the Treasury Interest Rate Statistics at http://www.treasury.gov/resource-center/data-chart-center/interestrates/Pages/default.aspx.*

The federal government has provided overnight lending to the banking sector at a near zero interest rate since 2008 and 10-year Treasury bonds fell from five percent interest rates to three percent interest rates. With the exception of subsidized Stafford loans, however, student loan rates have remained at the same high level for most borrowers in borrowing cohorts that have entered repayment since 2008. Further, the share of student loan origination with subsidized interest rates fell from 41 percent of all loans in 2002 to 36 percent in 2012. [7] In Figure 7, we include the 10-year Treasury bond yield rate on July 1st for each coming academic year as an indicator of the historically low cost of capital. As Figure 7 shows, many borrowers have received little benefit from the reduced cost of capital.

After reaching $29 billion in 2008, total student loan interest payments declined in 2009 (see Figure 8) as private loan interest rates and origination fell and subsidized student loan interest rates declined (see Figure 7). This involved an intervention by the federal government in 2009 to reduce the interest rate for subsidized Stafford loans. So even though subsidized loan origination has increased, total annual interest costs for subsidized loans have actually decreased.

Student loan interest costs continued to increase, however, because of the costs associated with other federal loan types. Interest rates for other federal loan types have remained high for new cohorts while the total origination of all federal loan types has increased in real dollars. Overall origination of private loans, however, decreased substantially from 2008 to 2012. Average borrowing rates have also declined for private loan borrowers, but are much higher for borrowers with poor credit scores. [8] As a result, overall interest spending for private loans has declined since 2008.

### *Discussion: The Breadth of Student Loan Origination Across Higher Ed Sectors*

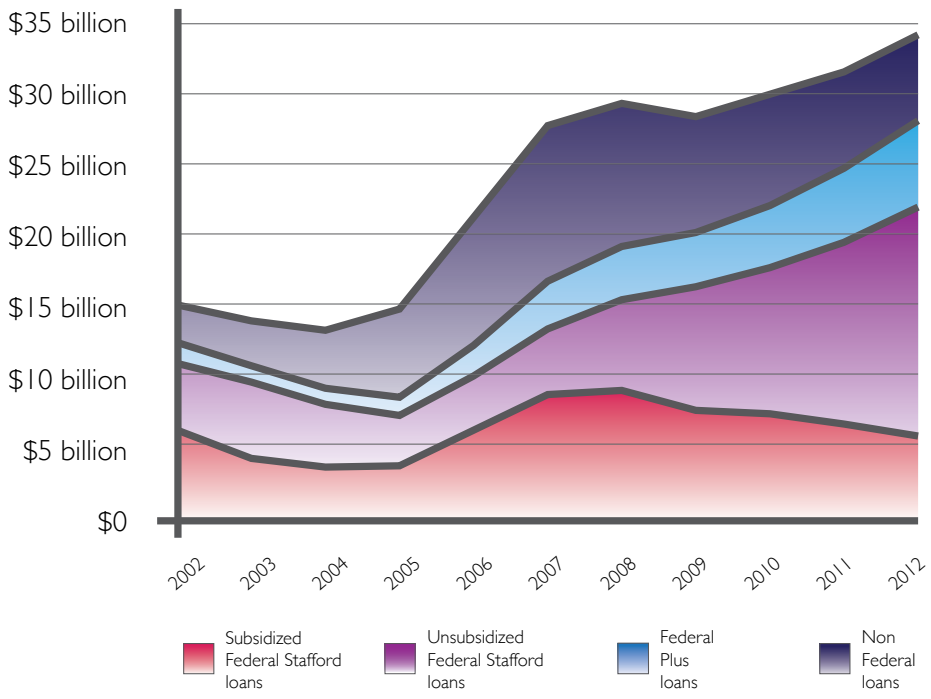
While the student loan debt increased across all sectors of higher education, its increase is most pro-

nounced among for-profit colleges. Among for-profit colleges with at least 1,000 students and with a majority of students enrolled as undergraduates in 2012, 10 of these colleges originated more than $25,000 in federal student loans *per enrolled student* — meaning origination per borrower was even higher. If a student borrowed this average amount each year, she would graduate with more than $100,000 in federal loans were she to graduate in four years. As we discussed in the earlier section on for-profits, however, the average student at a four-year for-profit college is unlikely to graduate at all. Meanwhile, graduates of two-year for-profit colleges are at higher risk of joblessness than graduates of public community colleges. Before a student drops out or graduates, however, for-profits are able to collect tuition revenue financed by the student's loans. Nearly $1.3 billion in federal student loans were originated in 2012 just for the 39,482 students at the top 10 for-profit colleges for loan origination.

Federal student loan origination per enrolled student is also high at four-year private nonprofits. Both public and private universities with professional degree programs tend to have higher student loan origination per student. But even if we look only at nonprofits with more than 1,000 students in 2012 and more than 50 percent of students who were undergrads, 31 of these colleges originated more than $15,000 in student loans per enrolled student in 2012. These colleges range from the nonprofit giant New York University to historically black colleges like Howard and Spellman.

Public universities tend to have lower federal student loan origination per enrolled student. Still, some public colleges quickly increased origination between 2002 and 2012. In 2012, 10 public colleges originated more than $10,000 in student loans per enrolled student. At Governors State University, for example, student loan origination reached $21,552 per enrolled student in 2012 after increasing by 632 percent since 2002.

**FIGURE 8:** Interest Payments on Student Loans, 2002-2012




*Source: Author calculations using origination data from the College Board, estimates of time in repayment period from the Department of Education, private student loan interest rate estimates from the Consumer Finance Protection Bureau and interest rate data from the Department of Education published by FinAid.org. See Appendix A for a methodological explanation of the calculations.*

# CONCLUSION

We have shown that financing costs per enrolled student have increased by 53 percent across the across the American higher education system while instructional and overall costs per enrolled student have remained flat. More research is needed to assess how these increases in financing costs do or do not impact policy objectives such as affordability, increased access, and college completion.

Such an assessment could begin with analysis of the risk that colleges may become unable to pay their increasing debt costs or borrowing for new investments. Since 2009, Moody's has published a negative outlook for the higher education sector to potential bond investors. In 2012, Moody's downgraded 22 higher education institutions and upgraded only eight.[74] In 2013, Moody's extended its higher education-wide negative outlook to include "market leading, research-driven colleges" because of "diminished prospects for revenue growth" – revenue that institutions counted on as they dramatically increased borrowing during the previous decade.[75] Moody's negative outlook reflects its downgrades in the last year of bond ratings for University of Chicago and the University of California, representatives of the nation's preeminent private and public research universities respectively. With downgrades reaching to the top of the college hierarchy, it is time to ask if college borrowing, particularly that for amenities, has played a role in destabilizing institutions' finances.

*With downgrades reaching to the top of the college hierarchy, it is time to ask if college borrowing, particularly that for amenities, has played a role in destabilizing institutions' finances.*

Debt and equity financed investments helped pay for boosting college enrollment in the last decade. Surely, it would take further investment to also increase col-

lege completion rates across the U.S. higher education system. The case of for-profits, however, is instructive. For-profits enjoyed tremendous investment from equity markets and used that capital well to make money, but produced far too few graduates with jobs. So it may not be enough to restore colleges' ability to obtain capital. Two questions for policy researchers then are 1) how do we get successful colleges to invest more in expanding enrollment, and 2) how do we get less successful colleges to invest more in student success.

It is a legitimate question to ask whether such investment can be funded with capital from credit markets. The demands of bond rating agencies may get in the way. Moody's makes it explicit that a large reason for its dire higher education forecasts is that it is now politically and economically harder for colleges to increase revenue much further through tuition increases. By this logic, the ability of colleges to finance further investments, including those needed to expand enrollment, may depend on whether families will borrow even more in student loans to pay yet higher tuition rates. Recent increases in student loan default rates, however, cast doubt as to whether students can afford to borrow more — and whether the federal government may see increases in the cost of its student lending programs as borrowers fail or refuse to repay.

If debt or equity investment cannot provide the investment needed, then it is overdue that we ask what viable alternatives do we have as a society to fund the expansion and improvements to higher education that are so popular. This question is complicated by the political forces that constrain the federal government and states' ability to increase higher education spending. Sorting through those complications is a task well beyond the scope of this report. But we hope that our findings on the high cost of higher education debt and equity financing will help build urgency for such needed policy and research initiatives.

# APPENDIX A: ESTIMATING ANNUAL STUDENT LOAN INTEREST SPENDING

Annual interest payments on institutional debts are tracked for each college and published in the Integrated Postsecondary Education Data System (IPEDS). Annual interest payments on student loans, however, are not tracked at the college level. And interest payments on Federal Family Education Loans (FFEL), the largest area of student loan origination prior to 2010, have never been tracked at any level. To address this inadequacy, we use data on annual student loan origination by loan type, the annual interest rates for each student loan type, and average time in deference and in repayment for student loans overall to estimate annual interest payments for each student loan cohort by loan type. For each year, total student loan interest payments by loan type are the sum of payments across all cohorts, exported in constant 2012 dollars.

Data on loan origination and interest rates came from the following sources. Our loan origination data by loan type for all federal and non-federal loans is by academic year and comes from the College Board.[76] For federal student loans, we use the annual interest rates for each academic year reported by FinAid.org.[77] For non-federal student loans, we used the estimates of average annual private student loan interest rates reported in the Consumer Financial Protection Bureau's 2012 *Private Student Loans* report. The CFPB used 2011 sample lender loan margin and historical LIBOR data to estimate these mean interest rates for private student loans with a standard methodology.[78] We use an estimate of private student loan interest rates as our estimate of interest rates for all nonfederal loans. Some non-federal student loans are issued by states and nonprofits. But the vast majority of non-federal student loans are private student loans issued by banks.

Very little data is available on how quickly or slowly borrowers pay off student loans. We assume that the average time from the origination of a student loan until it enters repayment is two years. Absent better data, we use two years as a conservative estimate given that most borrowing is by four-year degree students for whom the median time to complete a degree is 4.33 years.[79] As national enrollment grew annually from year to year and dropouts thinned second, third, and fourth year cohorts, it was more likely in each year that borrowers would come from first and second year cohorts than later cohorts. To be conservative, however, we assume an equal likelihood that borrowers came from a give cohort between one and four.

We further assume that all student loans are paid off at a constant rate over seven years. A seven-year average post-enrollment repayment time is latest estimate available to the authors for the average time to repayment for federal student loans.[80] It is likely that many student loans are paid off more quick-

ly at the end of the repayment period than at the beginning because borrowers are entering the labor market and have more resources to pay down a greater share of the principal. If this is the case, our estimates of interest payments are conservative because they assume that borrowers paid principal down at the rate necessary to generate fixed monthly payments at a given interest rate while the loan was in repayment. To the extent that borrowers actually paid down more principal later in the repayment period, they also paid more interest on that principal earlier in the repayment period.

Using the above data, we used the following process to calculate annual interest payments on all outstanding student loans. For each loan type, we calculated the total interest payments made in each year on the total loan origination for each annual cohort of loan recipients in nominal dollars. For the two years that we assumed student loans remained deferred before entering repayment, we also assumed that interest was not compounded, but was instead paid in the year of its accrual. We do not expect that this assumption holds equally across all loan types, but assuming that this interest is not carried forward yields the most conservative estimate of interest payments overall.

For the seven years that we assumed that the loans were in repayment, we calculated the total amount of principal and interest paid in the current year based on an amortization schedule that would generate fixed monthly payments over the remaining years of the repayment period. Because repayment interest rates varied from year to year, we repeated these calculations for each year based on the principal remaining from the previous year and number of monthly repayments remaining in the seven-year schedule. The result was a series of nine annual payments for each cohort of loans made on the total loan origination for each loan type (except for subsidized Stafford direct loans).

To obtain the total interest payments made in a given year on a given loan type, we summed the total interest payments made on each cohort of loans in a given year. Because we assumed that the period from origination to complete repayment was nine years in total, it was necessary to estimate the interest payments made on all student loans from the 1993 cohort (who paid on their student loans through 2002) through to the 2012 cohort. We then converted the resulting annual total into constant 2012 dollars. Second, we calculated what share of each monthly annuity payment went to principal payments and what share went to interest payments.

The procedures governing the accrual of interest during the initial deferment period differ considerably by loan type, and we modified our calculations for each loan type to reflect these key differences. For subsidized Stafford FFEL loans, we calculated interest payments for the two-year period before the loans entered repayment and include these in our annual totals because they reflect payments by the federal government to the private originators. For direct subsi-

dized Stafford loans, we calculated no interest or principal costs or payments for two years after the origination of a given loan cohort, because the federal government essentially pays itself interest during this period. For unsubsidized loans, which make up all other loan origination, we calculated interest payments for the two-year period before the loans entered repayment. In most cases it is likely that the interest accrued during deferral on unsubsidized loans is not paid and added to the principal at the start of repayment, but assuming it is paid yields a more conservative estimate.

Our calculations also take into account the annual change in interest rates on federal and private variable rate loans. Annual interest rates for federal loans vary based on the type of loan, whether the loan is in its initial deferment period or in repayment, and the date on which the loan was originated. For subsidized and unsubsidized federal loans, we specified an annual interest rate schedule for each loan cohort to account for these variations. For non-federal loans, detailed information is not available, and therefore we used the same private student loan interest rate estimate from the CFPB report for a given year for each loan cohort in its initial deferment or in repayment during that year.

A further word is in order about the average time to repayment from the end of enrollment. This is an average for all federal student loan types. So it is only appropriate to apply the seven-year average repayment time to national estimates of interest payments across all sectors and across all loan types. For this same reason, we are unable to provide estimates of student loan interest payments by sector. We have requested from the Department of Education data for more current estimates of average time in repayment that are broken down by borrowers' risk category. The distribution of borrowers by risk category varies by higher education sectors. So we hope to use this data in the future to estimate variation in annual interest payments on student loans by sector. Given the increase in default and deferment rates, we suspect that the average time in repayment has increased. If so, our estimate of annual student loan interest payments is lower than it should be. We will only know for sure after receiving updated data from the Department of Education.

We also use the seven-year average repayment time to estimate annual interest payments on non-federal student loans, a category that includes private student loans. We know of no comparable data that is publicly available for average repayment times for non-federal student loans. It may be possible to estimate average repayment times for private student loans by examining data published for student loan asset backed securities. As noted, the vast majority of non-federal student loans are private student loans. We suspect that average repayment times for non-federal student loans may be higher than the seven-year average because of the higher default rates for private student loans which make up much of the non-federal student loans. [31] If so, our estimate for annual interest payments on non-federal student loans is conservative.

# ENDNOTES

1 $491 billion in annual revenue was reported by colleges in the Integrated Postsecondary Higher Education Data System (IPEDS). When we add interest spending on student loans, total U.S. higher education spending rises to $525 billion. Appendix A details the methodology and data used to estimate total student loan interest payments from 2002 to 2012.

2 See OECD, *Education at a Glance 2013.*

3 See Donna M. Desrochers, Colleen M. Lenihan, and Jane V. Wellman, *Trends in College Spending 1998-2008* (Washington, DC, 2008); Brian Jacob, Brian McCall, and Kevin M Stange, *College as Country Club: Do Colleges Cater to Students' Preferences for Consumption?* (National Bureau of Economic Research, 2013); Charles T Clotfelter, *Buying the Best: Cost Escalation in Elite Higher Education,* vol. 41 (Princeton University Press Princeton, 1996); Howard R Bowen, *The Costs of Higher Education: How Much Do Colleges and Universities Spend Per Student and How Much Should They Spend?* (Berkeley, CA: ERIC, 1980).

4 See page 26 of Suzanne Mettler, *Degrees of Inequality: How Higher Education Politics Sabotaged the American Dream* (New York: Basic Books, 2014).

5 Ben Miller, *The Student Debt Review: Analyzing the State of Undergraduate Student Borrowing* (Washington, DC: New America, 2014).

6 Charlie Eaton and Jacob Habinek, *Why America's Public Universities – Not Just Their Students – Have A Debt Problem* (Cambridge, MA, 2013), http://www.scholarsstrategynetwork.org/sites/default/files/ssn_key_findings_eaton_and_habinek_on_public_universities_wall_street_problem.pdf.

7 Colleges and students have incurred numerous other financing costs such as fees for commercial banking, student bank and credit card fees, investment management fees, and losses from interest rate swaps and investments that were indexed to interest rates that banks colluded to manipulate. We exclude such costs from this analysis because they are diffuse and difficult to assess with comprehensive data for the entire higher education system.

8 This data is from the Integrated Postsecondary Education Data System (IPEDS) and is for interest payments on all institutional debts. This data can include interest payments on other credit instruments such as commercial paper. However, colleges' institutional debt is overwhelmingly in the form of municipal bonds.

9 Title IV funds include federal financial aid such as federal student loans and Pell Grants.

10 All financial amounts in this report are reported in 2012 constant dollars.

11 We estimate total higher education spending as $511 billion, the sum of $479 billion in total college revenue reported in IPEDS together with $32 billion in spending on interest payments for student loans. We explain our methodology for estimating interest payments in Appendix A.

12 Sheila Slaughter and Gary Rhoades, *Academic Capitalism and the New Economy: Markets, State, and Higher Education* (Baltimore, MD: JHU Press, 2010).

[13] Sandy Baum, Jennifer Ma, and Kathleen Payea, *Trends in College Pricing, Education Pays* (Washington, DC: College Board, 2013).

[14] See David Weerts, Thomas Sanfordeah, and Leah Reinert, *College Funding in Context: Understanding the Difference in Higher Education Appropriations Across the States* (New York, 2012).

[15] See page 42 of Suzanne Mettler, *Soldiers to Citizens: The G.I. Bill and the Making of the Greatest Generation* (Oxford University Press, 2005).

[16] See page 270 of Elba K. Brown-Collier, "Johnson's Great Society: Its Legacy in the 1990s." *Review of Social Economy* 56, no. 3 (1998): 259-276.

[17] See Mettler, *Degrees of Inequality: How Higher Education Politics Sabotaged the American Dream.*

[18] See page 194 of Gary Rhoades, *Political Competition and Differentiation in Higher Education, Differentiation Theory and Social Change* (New York: Columbia University Press New York, 1990).

[19] See The College Board, "Federal Aid per Recipient by Program in Current and Constant Dollars over Time," *Trends in Student Aid,* 2013, http://trends.collegeboard.org/student-aid/figures-tables/federal-aidrecipient-program-current-and-constant-dollars-over-time.

[20] See page 26 Mettler, *Degrees of Inequality: How Higher Education Politics Sabotaged the American Dream.*

[21] See page 26 Ibid.

[22] See page 87 of Therese L Baker and William Velez, "Access to and Opportunity in Postsecondary Education in the United States: A Review," *Sociology of Education* (1996): 82–101.

[23] See page four of Thomas G. Mortenson, *The Impact of Increased Loan Utilization among Low Family Income Students.* ACT student financial aid research report series, 1990.

[24] See page 23 of State Higher Education Executive Officers, *State Higher Education Finance: FY 2012* (Washington, DC, 2013).

[25] Author calculations using IPEDS data. Net tuition revenue measures how much revenue a college receives from tuition *after* that college has used some tuition revenue to fund financial aid – thereby reducing actual tuition costs for other students.

[26] Mettler, *Degrees of Inequality: How Higher Education Politics Sabotaged the American Dream.*

[27] See Roger L. Geiger, *Knowledge and Money: Research Universities and the Paradox of the Marketplace* (Stanford, CA: Stanford University Press, 2004); Roger L. Geiger, "The Quest for 'Economic Relevance' by US Research Universities," *Higher Education Policy* 19, no. 4 (2006): 411–431,; Walter W. Powell and Jason Owen-Smith, "Universities as Creators and Retailers of Intellectual Property: Life-Sciences Research and Commercial Development," in *To Profit or Not to Profit: The Commercial Transformation of the Nonprofit Sector* (Cambridge: Cambridge University Press, 1998),; Sheila Slaughter and Larry L Leslie, *Academic Capitalism: Politics, Policies, and*

*the Entrepreneurial University.,* Baltimore Johns Hopkins University Press (Baltimore, MD: Johns Hopkins University Press, 1997).

[28] See page 20 of Ronald G. Ehrenberg, Michael J. Rizzo, and George H. Jakubson, "Who Bears the Growing Cost of Science at Universities?," in *Science and the University,* ed. Paula E. Stephan and Ronald G. Ehrenberg (Madison, WI: University of Wisconsin Press, 2007), 19–35.

[29] Author calculations using IPEDS data.

[30] See page 2 of Robert Kelchen, *A Longitudinal Analysis of Student Fees: The Roles of States and Institutions,* 2014.

[31] Charlie Eaton, Jacob Habinek, Mukul Kumar, Tamera Lee Stover, Alex Roerkasse and Jeremy Thompson, "Swapping Our Future: How Students and Taxpayers Are Funding Risky UC Borrowing and Wall Street Profits," *Berkeley Journal of Sociology* no. 57 (2013): Forthcoming.

[32] As we note further in this section, IPEDS data shows that public college debts increased from $54 billion to $151 billion over the last decade.

[33] Calculations based on IPEDS data.

[34] Calculations based on IPEDS data.

[35] U.S. Securities and Exchange Commission, *Report on the Municipal Securities Market,* July 31st 2012, page 5, available at https://www.sec.gov/news/studies/2012/munireport073112.pdf.

[36] Calculations based on IPEDS data. The same trend holds for overall debt loads: the total outstanding debt of public four-year colleges has more than doubled from $47 billion in 2002 to $116 billion in 2012. Among community colleges, total outstanding debt has quintupled from $7 billion to $35 billion.

[37] Some public college systems, like in Minnesota, share financial responsibility and governance for both two-year community colleges, four-year colleges, and graduate institutions. We include such college systems in our estimates for four-year and above public colleges.

[38] It is possible to impute average spending levels for community colleges in the other states and territories for the purpose of estimating total national interest spending in the community college sector. This is not appropriate, however, for estimating individual states' interest spending levels.

[39] See Legislative Analyst's Office, *The 2013-14 Budget: Proposition 98 Education Analysis* (Sacramento, CA, 2013).

[40] Using data beginning in 1992, economists have found that more expensive amenities increased the likelihood that a student would choose to attend a given college, particularly if that student's family has a higher income level. See Jacob, McCall, and Stange, *College as Country Club: Do Colleges Cater to Students' Preferences for Consumption?.*

[41] See Greg Winter, "Jacuzzi U.? A Battle of Perks to Lure Students." *New York Times,* Oct. 5, 2003:

http://www.nytimes.com/2003/10/05/us/jacuzzi-u-a-battle-of-perks-to-lure-students.html

42 See University of California Office of the President, "What Do We Pledge to Bondholders?" *Capital Markets Finance Newsletter* 1(2): 2, available at http://www.ucop.edu/capital-markets-finance/_files/11-06-cmf-newsletter.pdf

43 See Jon Wilner, "Cal Stadium Plan Financially Flawed," *San Jose Mercury News,* June 24, 2013.

44 See Moody's Investor Service, "Rating Methodology: U.S. Not-for-Profit Private and Public Higher Education," August 26th, 2011, available at http://www.nebhe.org/info/pdf/tdbank_breakfast/093011/KimTuby_MoodysRatingMethodology_USHigherEducation_2011.pdf.

45 See The College Board, "Federal Aid per Recipient by Program in Current and Constant Dollars over Time."

46 See The College Board, "Percentage Distribution of Federal Aid Funds by Sector over Time," *Trends in Student Aid,* 2013.

47 See page 4 of United States Senate Health Education Labor and Pensions Committee, *Benefitting Whom? For-Profit Education Companies and the Growth of Military Educational Benefits* (Washington, DC, 2010).

48 See page 166 of Mettler, *Degrees of Inequality: How Higher Education Politics Sabotaged the American Dream.*

49 Author calculations using data from IPEDS.

50 David J Deming, Claudia Goldin, and Lawrence F Katz, *The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators?,* December 29, 2011, http://www.nber.org/papers/w17710.

51 U.S. Senate Committee on Health Education Labor and Pensions, *For Profit Higher Education: The Failure to Safeguard the Federal Investment and Ensure Student Success* (Washington, DC, 2012).

52 The gainful employment rules had been announced in 2011 but struck down by a federal district court. As of April 2014, industry associations and lobbyists were vigorously contesting the administrations efforts to reformulate the rules in a way that could survive judicial challenges.

53 See EDMC 2012 Annual Report. The private equity consortium reoffered EDMC on the NASDAQ stock exchange in 2009. As of September 2013 Goldman continued to hold a 43 percent ownership stake.

54 Ibid.

55 Since most for-profit colleges do not report any non-operating income, operating profit is synonymous with EBIT (earnings before interest and taxes).

56 These include: American Public Education; Apollo; Bridgepoint; Capella; Career Education Corp.; Corinthian; Devry; EDMC; Grand Canyon; ITT; Kaplan (see note 76 below); Lincoln; National American University; Strayer; and Universal Technical. Most of these publicly traded firms operate multiple college brands.

57 We matched individual campus records in the IPEDS data by institutional affiliation, and subtracted total expenses from total current funds revenues.

58 Note that we also used this latter technique to calculate profit figures for Kaplan University. Kaplan is owned by a publicly traded firm (Graham Holdings), which operates across multiple business segments outside of higher education. Using the IPEDS data allows us to isolate Kaplan University's profits from Graham Holdings' other businesses such as test preparation and publishing.

59 See page 10 of E.D. Tabs, *Enrollment in Postsecondary Institutions, Fall 2002 and Financial Statistics, Fiscal Year 2002* (Washington, DC, 2004).

60 See page 12 of Scott A. Ginder and Janice E. Kelly-Reid, *Enrollment in Postsecondary Institutions, Fall 2012; Financial Statistics, Fiscal Year 2012; Graduation Rates, Selected Cohorts, 2004-09;* and *Employees in Postsecondary Institutions, Fall 2012* (Washington, DC, 2013).

61 See page 17 of Deming, Goldin, and Katz, *The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators?.*

62 See page 2 of Ibid.

63 Author calculations using 10-K income statements for publicly traded for-profit colleges.

64 Authors' calculation using industry average margins dataset acquired from Aswath Damodaran (http://pages.stern.nyu.edu/~adamodar/). Gross margins are calculated as EBITDA SG&A / Sales.

65 See page 35 of Sheila Slaughter and Gary Rhoades. *Academic Capitalism and the New Economy: Markets, State, and Higher Education.* Baltimore: John Hopkins University Press, 2004.

66 See Congressional Budget Office, *Options to Change Interest Rates and Other Terms on Student Loans.* See also United States Government Accountability Office, *FEDERAL STUDENT LOANS Borrower Interest Rates Cannot Be Set in Advance to Precisely and Consistently Balance Federal Revenues and Costs* (Washington, DC, 2014).

67 See page 3 of Consumer Financial Protection Bureau and U.S. Department of Education, *Private Student Loans: Report to the Senate Committee on Banking, Housing, and Urban Affairs, the Senate Committee on Health, Education, Labor, and Pensions, the House of Representatives Committee on Financial Services, and the House of Representatives Committee on Education and the Workforce* (Washington, DC, 2012), http://files.consumerfinance.gov/f/201207_cfpb_Reports_Private-Student-Loans.pdf.

68 Author calculations using National Center for Education Statistics, "Power Stats," *National Postsecondary Aid Study,* 2014, http://nces.ed.gov/datalab/powerstats/.

69 We use National Student Loan Data System (NSLDS) data to estimate federal student loan origination by sector for two-year and above degree granting institutions only. NSLDS provides student loan origination data by college which allows us to break down origination by sector. When we sum student loan origination data from NSLDS, however, total origination is just $94 billion, compared to the $107 billion reported by the College Board. Given the discrepancy, we use College Board data on origination for our estimates of annual student loan interest spending. The methodology for this is described in Appendix A.

[70] We exclude Perkins loans because the fixed five percent interest rate paid on Perkins loans goes to a fund used to capitalize new loans. Neither banks nor the federal government can use interest paid on Perkins loans as profits or to fund other programs.

[71] Author calculations using student loan origination data from The College Board, "Total Student Aid and Nonfederal Loans in 2012 Dollars over Time," *Trends in Student Aid,* 2013.

[72] See Consumer Financial Protection Bureau and U.S. Department of Education, *Private Student Loans: Report to the Senate Committee on Banking, Housing, and Urban Affairs, the Senate Committee on Health, Education, Labor, and Pensions, the House of Representatives Committee on Financial Services* (Washington, DC, 2012), http://files.consumerfinance.gov/f/201207_cfpb_Reports_Private-Student-Loans.pdf.

[73] Author calculations using National Student Loan Data System and IPEDS data.

[74] Jeffrey J. Selingo, "Colleges Struggling to Stay Afloat," *New York Times,* April 12, 2013.

[75] Moody's Investor Service, *Moody's: 2013 Outlook for Entire US Higher Education Sector Changed to Negative* (New York, 2013), https://www.moodys.com/research/Moodys-2013-outlook-for-entire-USHigher-Education-sector-changed--PR_263866.

[76] See College Board, "Total Student Aid and Nonfederal Loans in 2012 Dollars over Time.". The College Board uses unpublished data from Policy, Budget, and Analysis Staff, U.S. Department of Education, and the National Student Loan Data System (NSLDS) of federal loans. College Board, *Trends in Student Aid: 2013* reports on page 34 that, "estimates for 2010-11 through 2012-13 provided by the Consumer Bankers Association, MeasureOne, and the Consumer Financial Protection Bureau. Earlier data based on information provided by lenders supplemented by data from annual reports and from NPSAS, 2008. Data on lending also collected from the major credit unions and their associations. Estimates of institutional lending are based on NPSAS, 2008 and 2012, as well as a survey of institutions conducted for the College Board by the National Association of Student Financial Aid Administrators (NASFAA). Data on loans from states are based on information collected from staff of state-sponsored private loan programs or state grant agencies, in addition to NASSGAP."

[77] See http://www.finaid.org/loans/historicalrates.phtml.

[78] See page 14 of *Private Student Loans.*

[79] See http://nces.ed.gov/pubs2011/2011236.pdf

[80] This estimate was provided by David Bergeron, former U.S. Acting Assistant Secretary for Higher Education based on technical briefings provided by the Department of Education prior to 2010.

[81] Consumer Financial Protection Bureau and U.S. Department of Education, *Private Student Loans: Report to the Senate Committee on Banking, Housing, and Urban Affairs, the Senate Committee on Health, Education, Labor, and Pensions, the House of Representatives Committee on Financial Services, and the House of Representatives Committee on Education and the Workforce.*