The Financialization of Higher Education

What Swaps Cost Our Schools and Students

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REIMAGINE THE RULES

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Who We Are

This report results from collaboration between the ReFund America Project, the Roosevelt Networks, and students at colleges across the country.

The Roosevelt Institute is home to the nation's largest network of emerging doers and thinkers committed to reimagining and rewriting the rules that guide our social and economic realities. Members of our network—organizing on 120 college campuses and in 38 states nationwide—partner with policy makers and communicators to provide clear, principled ideas and visionary, actionable plans. Our members actively influence policy on local, state, and national levels—from introducing legislation on protections for LGBTQ youth to consulting with local governments on natural disaster flood prevention. Inspired by the legacy of Franklin and Eleanor, Roosevelters reimagine America as it should be—a place where work is rewarded, everyone participates, and everyone enjoys a fair share of our collective prosperity.

The ReFund America Project tackles the structural problems in the municipal finance system that cost state and local governments across the U.S. billions of dollars each year at the expense of public services. We examine the ways financialization of the public sector and suppression of wages in the private sector drive austerity and wealth inequality. We research the role of financial deals in contributing to public budget distress and work with policy experts, community leaders, and public officials to develop, advocate for, and implement solutions to save taxpayer dollars.

Students attending the colleges featured in our case studies did much of the research and analysis in this report. These students dug through complicated financial documents, asked school administrators tough questions, built countless spreadsheets, and ultimately helped write the case studies in this document. Their work here demonstrates their deep concern for, and understanding of, the issues that will impact the well-being of generations to come. This document is their clarion call to prioritize the next generation of students—and other people with a stake in the affordability and accessibility of higher education—over wealthy Wall Street banks.

Executive Summary

Higher education in the U.S. is in a state of crisis. We see evidence of this crisis in huge cuts in funding for public schools, skyrocketing costs of attendance at both private and public schools, and increases in student debt burdens. These interrelated trends are connected to the underlying phenomenon of the financialization of our economy generally and of higher education specifically. Mike Konczal, who runs the Financialization Project at the Roosevelt Institute, defines financialization as the "increase in the size, scope, and power of the financial sector—the people and firms that manage money and underwrite stocks, bonds, derivatives, and other securities—relative to the rest of the economy."[1] Financialization has a number of disturbing consequences for higher education, including increases in overall borrowing by colleges and universities, increases in the cost of interest payments on debt on a per-student basis, and a concentration of endowment assets at a small group of the wealthiest institutions—a form of concentration of wealth.[2] The result is a system of higher education that works to increase social and economic inequalities, instead of serving as the equalizer we have long imagined college to be.

[1] Michael Konczal, "Frenzied Financialization: Shrinking the Financial Sector Will Make Us All Richer," Washington Monthly, November, 2014.
[2] Charlie Eaton, Jacob Habinek, Adam Goldstein, Cyrus Dioun, Daniela García Santibáñez Godoy, and Robert Osley-Thomas, "The Financialization of U.S. Higher Education," Socio-Economic Review (2016): 1-29

Colleges and universities are losing money on bad Wall Street deals. One way that financialization manifests is expensive, risky, complex financial deals that colleges and universities have entered as they have increased their reliance on debt financing. This paper examines complicated and risky financial deals involving colleges and universities across the country, primarily focusing on the costs of a particular risky deal known as an interest rate swap. Though schools were lured by banks' promises that these deals would save them money on borrowing, instead these deals have transferred wealth from schools and students to banks.

Swaps have cost just 19 schools $2.7 billion. We provide detailed case studies of 19 colleges and college systems that analyze the costs of interest rate swaps and other toxic deals. The costs associated with swaps have siphoned billions of dollars out of these schools' budgets, at a time when schools are increasingly passing on their increased costs to students, including borrowing costs and, for public schools, costs related to decreases in state and federal funding.

Reliance on borrowing makes schools vulnerable to risky deals. As direct federal and state funding for public schools has drastically decreased, schools increasingly rely on borrowing, making them vulnerable to banks' claims that complicated financial deals will save them money in the long run. Public and private schools both are competing with each other for student dollars, increasingly courting wealthier students with fancy amenities built with borrowed money.

Key Findings

- The use of risky, exotic financial instruments is related to colleges' increased borrowing, itself part of the trend of financialization.
- Among a random sample from Forbes' 500 colleges and universities around the U.S., 58 percent have or have had a risky derivative product called an interest rate swap on their books. These swaps have cost schools hundreds of millions of dollars since the 2008 economic crash caused by Wall Street.
- In our case study sample of 19 schools, we've identified $2.7 billion in unnecessary swap costs already incurred by schools.
- These 19 schools would have to pay an estimated $808 million in penalties to get out of their remaining swap deals.
- The money spent on swaps could pay for tuition and fees for 108,000 students at the schools in our sample.[3]
- There is a transparency problem. Because of inadequate disclosure in some schools' financial documents, it can be very difficult and sometimes impossible to determine just how much these bad deals are costing schools.
- There are potential conflicts of interest in cases where the same bank served as both underwriter and swap counterparty on a deal. Underwriters are de facto advisors that likely helped the school decide to issue variable-rate bonds with a swap rather than a traditional fixed-rate bond. Conflict arises if the bank advised the school to use a deal structure that it later profited from as a counterparty.
- There are bankers and finance industry executives on university boards, including on boards doing business with the board members' companies. This can be a conflict of interest for governing board members who should prioritize the school's best interest but could benefit from financial gain for their companies.
- The money spent on risky financial deals represents a transfer of wealth from students to Wall Street.

[3] We calculated this by dividing the total swap costs for each institution by the cost of fees and tuition for that institution, which gave us per-school figures for how many students the swap costs could pay for. We then added up the numbers of students for all of the institutions.

The particular deals we examine are only a small part of a larger relationship that schools have with the financial industry. Much like state and city budgets and pension funds, colleges and universities have come to represent a pool of money Wall Street and wealthy investors can exploit. The money Wall Street extracts from college budgets and endowments is a transfer of wealth from students to banks and investors, and interferes with the ability of schools to complete their core functions: educating students and preparing them for a life of learning.

What We Can Do About It

Banks that sold interest rate swaps to colleges and universities typically misrepresented the risks inherent in the deals. This likely violated the federal fair dealing rule and state laws for fraudulent concealment or misrepresentation. Schools may be able to take legal action to get out of remaining deals without paying hefty termination penalties, or even to recoup costs. Options available to schools may include:

- Petitioning the Securities and Exchange Commission to bring an enforcement action against the banks for disgorgement of their ill-gotten gains.
- Suing the banks under state law[4] for fraudulent concealment or misrepresentation. In so doing, the state could also request an injunction from the judge to stop making payments during the legal proceedings, which could provide immediate budgetary relief.

Students concerned about their schools' involvement in budget-draining bad deals also have options. Students can:

- Find the bad deals that are draining money out of their campuses by doing research similar to what we've done in this report.
- Demand transparency at their institutions and ask the school to disclose what it spends on banking and on borrowing. As a first step, the school can make this information easily accessible, but students can demand a full audit of these costs and make the audit public.
- Demand that their school's administration prioritize students and other campus stakeholders over banks and investors by taking action to get out of existing bad deals without further expense.
- Demand that their administration investigate their legal options, including asking the Securities and Exchange Commission to investigate their school's bad deals, looking for violations of federal law.
- Demand tuition or fee freezes until the school takes action on its bad deals.

Introduction

Higher education in the U.S. is in a state of crisis. We see evidence of this crisis in huge cuts in funding for public schools, skyrocketing costs of attendance at both private and public schools, and increases in student debt burdens. These interrelated trends are connected to the underlying phenomenon of the financialization of our economy generally and of higher education specifically. Mike Konczal, who runs the Financialization Project at the Roosevelt Institute, defines financialization as the "increase in the size, scope, and power of the financial sector—the people and firms that manage money and underwrite stocks, bonds, derivatives, and other securities—relative to the rest of the economy."[5] A significant result of financialization is an explosion of inequality, including income and wealth inequality. As financial expert Wallace Turbeville puts it, "Many forces contribute to growing inequalities of income and wealth, but the financial system is the medium through which they work and has become a controlling factor."[6]

[4] Legal options at the state level may depend on particulars of state law.
[5] Michael Konczal, "Frenzied Financialization: Shrinking the Financial Sector Will Make Us All Richer," Washington Monthly, November, 2014.
[6] Wallace Turbeville, "Financialization and Equal Opportunity," Demos, February 10, 2015.

Charlie Eaton, a University of California Berkeley sociologist, and his colleagues have looked specifically at the financialization of higher education in terms of "both increasing reliance on financial investment returns and increasing costs from transactions to acquire capital."[7] Eaton and his co-writers describe a range of indicators of financialization, including (but not limited to) an increase in student loan interest as a percentage of household spending on tuition, increases in overall borrowing by colleges and universities, increases in the cost of interest payments on debt on a per-student basis, and a concentration of endowment assets at a small group of the wealthiest institutions.[8]

The financialization of higher education has numerous disturbing consequences for colleges and universities across the U.S. One way that financialization manifests is expensive, risky, complex financial deals that colleges and universities entered as they have increased their reliance on debt financing. (Another is endowments, which we won't talk about in this report.[9]) This report examines the high costs of toxic financial deals at campuses across the U.S., including community colleges, public universities, and private four-year institutions.[10] We focus most of our attention on a type of derivative financial instrument known as an "interest rate swap," while also investigating other bad deals draining money out of college budgets, including auction rate securities (ARS). We explain the details of these financial tools below. To illustrate a widespread national problem, we provide 19 case studies that are detailed examinations of the ways particular bad deals are harming particular schools.

The problem of bad financial deals arises in part from a shift in banking models. Historically, the primary function of banking was credit intermediation. Banks were middlemen who facilitated transactions between those who needed money (borrowers) and those who had it (depositors and investors). A good middleman delivers services efficiently, without too much waste. Likewise, an efficient banker was one who matched up creditors and debtors without wasting their money. Therefore, the more fees a banker charged, the less efficient he was. In the financialized economy, by contrast, the Wall Street business model is based on extracting as many dollars as possible out of every deal. In this extraction model, banks' profit incentive drives them to find new ways to profit, including by introducing new types of financial products with arbitrary and excessive fees, penalties, and risks falling heavily on borrowers.[11]

Schools increasingly borrow money—mostly through the issuance of municipal bonds—for projects as part of the "amenities arms race," in which colleges and universities compete with each other by offering more and fancier facilities such as gyms, student centers, or luxurious housing, in hopes of luring students who are willing to pay more to attend a campus with these amenities. In fact, Eaton and his colleagues found that only about 25 percent of all interest payments made by colleges and universities were for investments in classroom construction and other instruction-related projects. At both private and public institutions, the majority of borrowing paid for capital investments in "student services" and "auxiliary services"—the Department of Education categories that include stadiums, cafeterias, and recreation centers[12]; at public four-year colleges and universities, more than half of all interest spending fell into these categories. Borrowing at public institutions corresponds with decreases in public funding and steep increases in fees and tuition for students, as underfunded public institutions compete with

[7] Charlie Eaton, "The Financialization of US Higher Education," Demos, February 16, 2016, accessed May 23, 2016, http://www.demos.org/blog/2/16/16/financialization-us-higher-education.
[8] Charlie Eaton, Jacob Habinek, Adam Goldstein, Cyrus Dioun, Daniela García Santibáñez Godoy, and Robert Osley-Thomas, "The Financialization of U.S. Higher Education," Socio-Economic Review (2016): 1-29
[9] "Endangered Endowments: How Hedge Funds Are Bankrupting Higher Education," Hedgepaper 25, February 7, 2016, accessed May 23, 2016, http://hedgeclippers.org/endangered-endowments/.
[10] We did not include private for-profit institutions.
[11] Saqib Bhatti, "Dirty Deals: How Wall Street's Predatory Practices Hurt Borrowers and What We Can Do About It," Roosevelt Institute, November 18, 2014, accessed May 23, 2016, http://rooseveltinstitute.org/wp-content/uploads/2015/11/Bhatti_Dirty_Deals.pdf
[12] Charlie Eaton, Cyrus Dioun, Daniela García Santibáñez Godoy, Adam Goldstein, Jacob Habinek and Robert Osley-Thomas, "Borrowing Against the Future: The Hidden Costs of Financing U.S. Higher Educationm" Debt and Society, May 22, 2014.

private institutions for students, including foreign or out-of-state students who pay more in fees and tuition.[13] Cash-strapped public institutions are especially vulnerable to risky deals as they attempt to save money on borrowing, but some of the most disastrous deals we've seen have been at elite private institutions which entered into swaps as part of planned expansions.

Eaton and his colleagues found that community colleges, private four–year institutions, and public four-year colleges have taken on increasing amounts of bond debt since at least 2003, and that debt-financing costs have grown across those three sectors—primarily due to increased borrowing. For example, between 2003 and 2012, the per-student annual spending on interest payments increased 45 percent at public colleges, 23 percent at private colleges, and a whopping 76 percent at community colleges.[14]

As higher education has financialized, colleges increasingly resemble financial companies and corporations, moving away from their core mission of educating students and further into the realm of competing for and servicing customers, and involvement in increasingly complex and opaque financial transactions and investment vehicles. Higher education is becoming less affordable and less accessible for large numbers of potential students; soon only wealthy students will be able to graduate without crippling debt. We see schools catering to wealthy students who can afford and are willing to pay for amenities such as fancy gyms and modern student centers—students who have essentially been monetized by these institutions. In this way, higher education ceases to be an equalizing force and begins to exacerbate inequality.

> ***"We shouldn't be in the banking business, we should be in the education business," Leon Botstein, president of Bard College in Annandale-on-Hudson, New York.[15]***

Over the last fifteen years, tuition increases have far outpaced inflation and wage increases. In the 2000-2001 school year, the average annual tuition at a private college was $16,075 and $3,508 at a public one. Today, the average prices are $32,405 and $9,410 respectively.[16] This is not just a problem among elite private institutions. Even though private institutions may have the highest sticker price, public universities have seen higher relative increases in prices.

Colleges have increased the cost they pass on to students, whether it's the bill for the amenities elite schools are building as they compete with each other for prestige or the loss of federal and state funding public schools have to make up for somewhere. As well, since the 1970s, most federal funding is channeled through markets instead of given directly to public schools because students apply directly for federal aid and then take that aid with them to the school they choose. Schools increase spending as they compete for these students and their federal dollars.[17]

The results have been disastrous because students have increasingly relied on loans to finance their education. In 2012, the average student owed $29,400 (up 25 percent from 2008).[18] In 2015, that number was estimated to be roughly $35,000.[19] In 2015, the total amount of outstanding student loans reached a record level of $1.2 trillion.[20]

[13] Charlie Eaton, Jacob Habinek, Mukul Kumar, Tamera Lee Stover, Alex Roehrkasse, and Jeremy Thompson, "Swapping our Future: How Students and Taxpayers Are Funding Risky UC Borrowing and Wall Street Profits," Debt and Society, January 2014, accessed May 23, 2016, http://debtandsociety.org/wp-content/uploads/2014/01/SwappingOurFuture_Final.pdf
[14] Eaton et al., "The Financialization of U.S. Higher Education," 14.
[15] Michael McDonald, John Lauerman, and Gillian Wee, "Harvard Swaps Are So Toxic Even Summers Won't Explain," Bloomberg, December 18, 2009.
[16] "Trends in Higher Education: Tuition and Fees and Room and Board over Time," CollegeBoard, accessed May 23, 2016, http://trends.collegeboard.org/college-pricing/figures-tables/tuition-and-fees-and-room-and-board-over-time-1.
[17] Eaton et al., "The Financialization of U.S. Higher Education," 14.
[18] The Institute for College Access & Success, March 2014. "Quick Facts About Student Debt," http://ticas.org/sites/default/files/pub_files/Debt_Facts_and_Sources.pdf
[19] Jeffrey Sparshott, "Congratulations, Class of 2015. You're the Most Indebted Ever (For Now)," Wall Street Journal, May 8, 2015, accessed May 23, 2016, http://blogs.wsj.com/economics/2015/05/08/congratulations-class-of-2015-youre-the-most-indebted-ever-for-now/.

This crippling debt is already having huge macroeconomic impacts: an entire generation will enter the economy at a financial disadvantage. Students who graduate with huge amounts of debt will be less likely to obtain a mortgage and become homeowners, obtain a loan for a car, start a business, or save for retirement.[21]

Colleges and universities are not the only institutions that have fallen victim to toxic swaps and other unfair deals. We decided to investigate bad deals at colleges after discovering how widespread the problem of toxic Wall Street deals is at all levels of government, from K-12 public schools,[22] to city mass transit,[23] water,[24] and other infrastructure systems, to state governments.[25] The extraction model of banking targets any large pool of money it can.

In the long run, we hope that this report gives schools and stakeholders the information they need to fight back against bad Wall Street deals. Thus, in our recommendations section, we've laid out concrete steps schools can take to avoid getting into bad deals, to get out of existing deals without additional fees, and even to take action to recoup past costs. We also have a set of recommendations for students interested in researching the role Wall Street plays in their own institutions' finances, and demanding more transparency around banking issues at their schools.

We begin the report with an overview of our findings and a brief explanation of our methodology. From there, we explain in detail specific risky deals and why they are so problematic. Next, we provide a summary overview of our case studies, then we present our recommendations and conclusions. In the appendix, you'll find a more detailed discussion of some of our research methods, as well as detailed case studies for each of our campuses.

The Research: Findings and Methodology

Key Findings

- The use of exotic financial instruments is related to colleges increased borrowing, itself part of the trend of financialization.
- Among a random sample from Forbes' 500 colleges and universities around the U.S., 58 percent have or have had a risky derivative product called an interest rate swap on their books. These swaps have cost schools hundreds of millions of dollars since the 2008 economic crash caused by Wall Street.
- In our case study sample of 19 schools, we've identified $2.7 billion in unnecessary swap costs already incurred by schools.
- Those schools would have to pay an estimated $808 million in penalties to get out of the remaining deals.
- The money these schools spent on swaps could pay for tuition and fees for 108,000 undergraduate students at these schools.[26]

[20] Nicholas Rayfield, "National student loan debt reaches a bonkers $1.2 trillion," USA TODAY College, April 8, 2015, accessed May 23, 2016, http://college.usatoday.com/2015/04/08/national-student-loan-debt-reaches-a-bonkers-1-2-trillion/.
[21] "Student Loan Debt Can Have Lasting Negative Consequences for Borrowers and the Economy," U.S. Senate Budget Committee Budget Blog, June 3, 2014, accessed May 23, 2016, http://www.budget.senate.gov/democratic/public/index.cfm/2014/6/student-loan-debt-can-have-lasting-negative-consequences-for-borrowers-and-the-economy.
[22] Cate Long, "Pennsylvania's Worthy Debate Over Swaps," Reuter's Muniland, September 10, 2013, accessed May 23, 2016, http://blogs.reuters.com/muniland/2013/09/10/pennsylvanias-worthy-debate-over-swaps/.
[23] Gretchen Morgensen, "How Banks Could Return the Favor," The New York Times, June 9, 2012, accessed May 23, 2016, http://www.nytimes.com/2012/06/10/business/banks-could-return-a-favor-to-governments-fair-game.html?_r=0
[24] Carrie Sloan, "How Wall Street Caused a Water Crisis in America's Cities," The Nation, March 11, 2016, accessed May 23, 2016, http://www.thenation.com/article/how-wall-street-caused-a-water-crisis-in-americas-cities/.
[25] Harvard Zhang, "Illinois Pays Wall Street Millions Despite Budget Deadlock," Medill Reports Chicago, January 19, 2016, accessed May 23, 2016, http://news.medill.northwestern.edu/chicago/illinois-pays-wall-street-millions-despite-budget-deadlock/.

[26] We calculated this by dividing the total swap costs for each institution by the cost of fees and tuition for that institution, which gave us per-school figures for how many students the swap costs could pay for. We then added up the numbers of students for all of the institutions.

- There is a transparency problem. Because of inadequate disclosure in some schools' financial documents, it is can be very difficult and sometimes impossible to determine just how much these bad deals are costing schools.
- There are potential conflicts of interest in cases where the same bank served as both underwriter and swap counterparty on a deal. Underwriters are de facto advisors that likely helped the school decide to issue variable-rate bonds with a swap rather than a traditional fixed-rate bond. Conflict arises if the bank advised the school to use a deal structure that it later profited from as a counterparty.
- There are bankers and finance industry executives on university boards, including on boards doing business with the board members' companies. This can be a conflict of interest for trustees who should prioritize the school's best interest but could benefit from financial gain for their companies.
- The money spent on risky financial deals represents a transfer of wealth from students to Wall Street.

Our report centers on a series of case studies that allow us to do a detailed analysis of specific deals at particular campuses. We've provided 19 case studies that closely examine interest rate swaps at a wide range of institutions, from private Ivy League universities to public community college systems. Most of the schools in our case study are campuses where students are active in Roosevelt's Campus Network, and these students researched their own schools. We were unable to do full case studies on three of our target institutions, because of lack of publicly available information, and we discuss these schools in a note on transparency. Many swap deals include Auction Rate Securities, a type of highly risky variable rate bond, so we have included a discussion of those. Finally, we've included a snapshot of the high cost of Capital Appreciation Bonds in California community colleges as another example of the ways in which a risky financial deal unfolded in a college setting.

The table below summarizes the swap-related costs we've identified for each of our interest rate swap case studies. We found a total of $2.7 billion in swap costs at our 19 case study schools, enough to pay tuition and fees for 108,000 students at those schools.

Figure 1

School	Net Swaps Payments	Swap Termination Fees Paid	Total Swap Payments and Termination Fees	Potential termination fees
Alabama State University	$5.4 Million	N/A	$5.34 Million	$3.74 Million
American	$92 Million	N/A	$92 Million	$76.2 Million
Carnegie Mellon	$39.15 Million	N/A	$39.15 Million	$34.1 Million
City University of New York	$172.5 Million	$26.16 Million	$198.7 Million	$73.43 Million
Columbia	$69.62 Million	N/A	$69.62 Million	$68.2 Million
Cornell	$217 Million	$63.3 Million	$280 Million	$206 Million
Fordham	$22.2 Million	N/A	$22.2 Million	$15.3 Million
Georgetown	$117 Million	$53 Million	$170 Million	$41 Million
Goucher	$12.4 Million	N/A	$12.4 Million	$5.9 Million
Harvard	N/A	$1.25 Billion	$1.25 Billion	N/A
Michigan State	$112.4 Million	$ 17.8 Million	$ 130.2 Million	$54.1 Million
Peralta Community College	$5.6 Million	N/A	$5.6 Million	$22 Million
Stanford	$50 Million	$13 Million	$63 Million	$35.6 Million
Sweet Briar	$2.5 Million	$787,997	$3.24 Million	N/A
University of California Medical Schools	N/A	N/A	$57 Million	$91.1 Million
University of Illinois	$61 Million	N/A	$61 Million	$24 Million
University of Michigan	$85.5 Million	N/A	$85.5 Million	$28.35 Million
University of Minnesota	$32.8 Million	$17.2 Million	$50 Million	$6.84 Million
Wake Forest	$56 Million	$36.2 Million	$92.2 Million	$22.1 Million
Total	$1.15 Billion	1.48 Billion	$ 2.7 Billion	$808 Million

For more detailed info on our methods, please see our methodology section in the appendix.

The Bad Deals Draining Money Out of College Budgets

The schools in our case studies entered into the bad deals we discuss in the course of borrowing money, generally—but not exclusively—for capital projects. The deals we focus on are "exotic" financial products, which are more complex and generally riskier than ordinary borrowing instruments. For ordinary, low-risk borrowing for capital projects, a fixed rate 30-year bond is standard. The products we discuss were typically pitched to borrowers as a way for them to save money on borrowing costs compared to ordinary fixed rate bonds. Instead of safe bets on low cost borrowing, however, these deals have proven to be disastrously expensive losing gambles for many of the colleges and universities that entered into them.

Before we get to our case studies, we need to explain the basics of these deals.

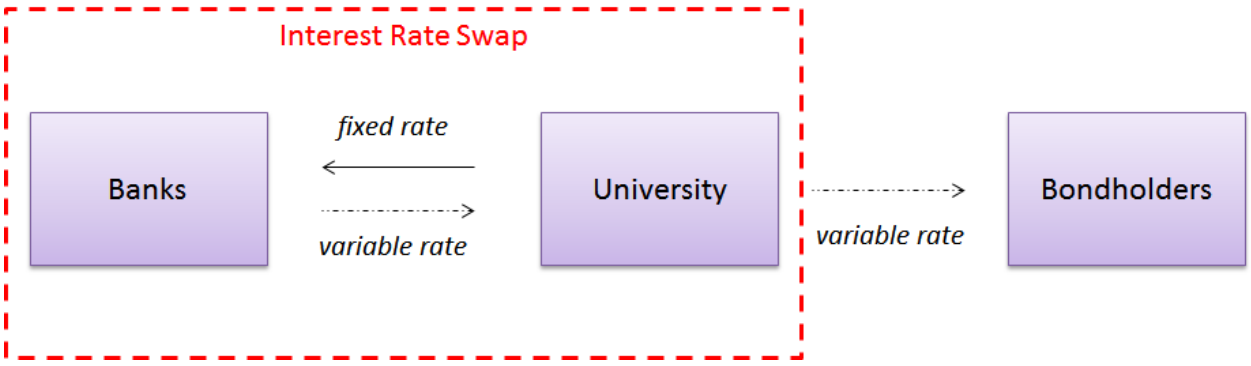
What Is an Interest Rate Swap and How Does it Work?

Although interest rate swaps can serve many functions, we focus here on hedging interest rate swaps, a derivative instrument banks pitched to colleges and universities—and to cities, states, and other municipal borrowers—as a way to protect against spikes in interest on variable-rate debt and save money on borrowing. However, these deals were loaded with risks. These risks materialized when the banks crashed the economy in 2008, and many of these borrowers found themselves trapped in deals that began to function as big moneymakers for the banks that were party to the deals.

When borrowers such as governments, nonprofit organizations, and schools issued variable-rate bonds, banks offered them a deal. The banks said that if these borrowers would pay the banks a steady, fixed interest rate, then the banks—known as bank "counterparties"—would pay back a variable rate that could be used to pay the interest on the bonds. Banks sold interest rate swaps as insurance policies for investors, giving bond issuers a synthetic fixed rate that would let the borrowers lock in lower interest rates without having to worry about those rates shooting up in the future. Many schools signed swap deals for 30 or 40 years, contracts that would have been regarded as drastically off-market in the corporate world, where swap contracts rarely surpass seven years.

Figure 2 shows the structure of a synthetic fixed-rate deal, which includes a hedging interest rate swap. The school's payments on the variable-rate bond are on the right side, and the interest rate swap is on the left side. The idea is that the variable rate that the bank pays the school on the swap should approximate the variable rate that the school pays the bondholders, which means the two should effectively cancel each other out, and the school's only actual payment would be the fixed rate it pays to the bank on the swap.

Figure 2: Structure of a Variable-Rate Bond with an Interest Rate Swap



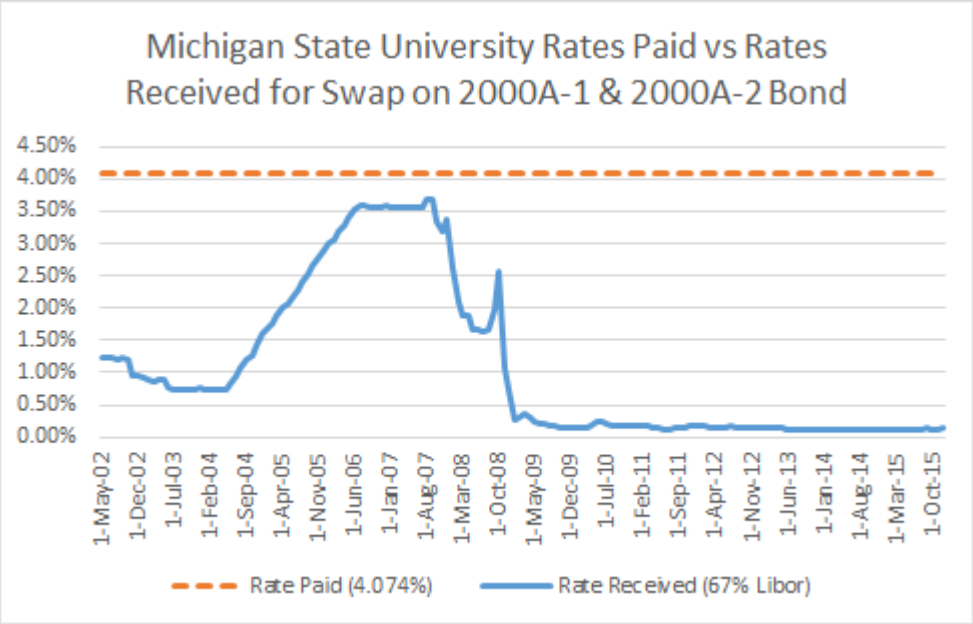
But these deals came fully loaded with a set of huge risks. Perhaps the biggest risk was posed by the egregious termination clauses embedded in the swap agreements, making them sometimes prohibitively expensive for schools to extricate themselves from. Termination penalties are determined by the net present value of future payment on the swap deals. Termination can be triggered by a variety of circumstances, depending on the clauses written into the contract. For example, a lowering of the credit rating of the borrower or the swap counterparty could trigger termination. When Lehman Brothers failed in 2008, termination clauses were triggered in the swaps Lehman was involved in, and the bankrupt bank was able to collect huge termination fees from the colleges, nonprofits, and municipalities that had swaps with Lehman.[27] As the Lehman example illustrates, part of the risk to issuers is that they could be forced to pay large termination fees due to circumstances beyond their control and for which they bear no fault.

Banks pitched these deals as a sort of insurance policy for bond issuers, but they were actually more of a gamble—a bet that interest rates would rise. One of the big risks from the beginning was what would happen if variable rates were to instead dip very low. The banks would pay the issuer low payments based on these low rates, while the issuer would be stuck paying much higher payments to the bank. That is exactly what happened when the banks crashed the economy in 2008 and the Federal Reserve slashed interest rates in response. Not only did issuers' net payments on the swaps rise when the Fed stepped in to bail out the banks, but many schools were unable to take advantage of the low interest rate environment to refinance because they could not get out of their 30- or 40-year interest rate swaps without paying harsh penalties.

The Fed's intervention has lead to seven years of extraordinarily low interest rates, and correspondingly high net swap payments for schools. Furthermore, the sharp decline in variable interest rates actually caused the termination penalties on these deals to balloon, since these penalties are calculated based on the net present value of all future payments on the swap. The lower the interest rates the counterparty bank is paying at any given moment, the higher that value is. Thus, at precisely the time that it would have been most advantageous for schools to refinance their bonds, the penalties to get out of the corresponding swap deals were higher than ever before. In essence, the swaps trapped colleges and universities in deals that became immensely profitable for the banks.

Figure 3 below is an example of how interest rates for schools and banks drastically diverged after the economy crashed. The example is taken from one of our case study schools, Michigan State University. The jagged line is the fixed rate paid by the school, and the solid line is the variable rate paid by the bank. Though the bank always came out ahead on this swap, the situation quite obviously gets much worse for the school beginning in late 2008.

[27] Martin Z. Braun, "Zombie Lehman Stalks Nonprofits for Swap Payments," Bloomberg, May 16, 2013, accessed May 23, 2016, http://www.bloomberg.com/news/articles/2013-05-16/zombie-lehman-stalks-nonprofits-for-swaps-payments.



Another factor that may have increased many schools' swap costs was illegal manipulation by banks of the London Interbank Offered Rate (LIBOR). LIBOR is an interest rate index that is the basis for the variable rates paid by counterparty banks on swaps at many of the schools we studied. A change in LIBOR of just one one-hundredth of a percentage point can mean tens of billions of dollars in bank profits—and higher swap payments for schools with LIBOR connected swaps. Between March 2007 and August 2010, sixteen of the world's largest banks colluded to manipulate LIBOR downward.

Financial regulators and law enforcement authorities in the U.S., the U.K., Europe, Japan, and Canada have launched investigations into the alleged collusive manipulation of LIBOR by certain major banks.[28] Several traders have been fired or put on leave from these banks,[29] have been banned from working in the financial industry,[30] or have received prison sentences as a result.[31] Nine bank companies, including JPMorgan, UBS, and Deutsche Bank, have already admitted to or were found responsible for manipulating LIBOR.[32] A unit of UBS pleaded guilty to criminal wire fraud in connection with the scandal.[33]

Auction Rate Securities

Auction rate securities (ARS), also known as auction rate certificates (ARCs), are a type of variable-rate bond that is often paired with an interest rate swap. The interest rates on ARS typically reset every seven, 28, or 35 days (there are also other, less common reset periods). At the end of every reset period, bondholders who want to sell their ARS auction them off to investors who bid the lowest interest rate they are willing to accept for the bond. The interest rate therefore resets at every auction. Banks collect exorbitant fees for conducting these auctions.[34]

[28] Steve Slater, "Banks served Libor subpoenas," The Globe and Mail, March 17, 2011, accessed May 23, 2016, http://www.theglobeandmail.com/globe-investor/banks-served-libor-subpoenas/article1945230/.
[29] Megan Murphy, Brooke Masters, and Caroline Binham, "Probe reveals scale of Libor abuse," Financial Times, February 9, 2012, accessed May 23, 2016, http://www.ft.com/intl/cms/s/0/5ae1f598-5264-11e1-a155-00144feabdc0.html.
[30] Suzy Ring and Gavin Finch, "Ex-UBS Trader is Second Banker to Face Ban over LIBOR this Week," Bloomberg, April 14, 2016, accessed May 23, 2016, http://www.bloomberg.com/news/articles/2016-04-14/u-k-regulator-seeks-to-ban-ex-ubs-libor-trader-from-industry.
[31] U.S. Department of Justice Office of Public Affairs, "Two Former Rabobank Traders Sentenced to Prison for Manipulating U.S. Dollar and Japanese Yen LIBOR Interest Rates," March 10, 2016, accessed May 23, 2016, https://www.justice.gov/opa/pr/two-former-rabobank-traders-sentenced-prison-manipulating-us-dollar-and-japanese-yen-libor.
[32] Michael Ovaska and Margot Patrick, "The Libor Settlements," The Wall Street Journal, accessed May 1, 2016, http://online.wsj.com/news/articles/SB10001424127887324616604578302321485831886; and Max Colchester, "Lloyds Pays $370 Million to Settle Rate Probe," The Wall Street Journal, July 28, 2014, accessed May 23, 2016, http://online.wsj.com/articles/lloyds-banking-group-fined-over-libor-1406551340.
[33] Mark Scott and Ben Protess, "As Unit Pleads Guilty, UBS Pays $1.5 Billion Over Rate Rigging," New York Times DealBook, Dec 19, 2012, accessed May 23, 2016, http://dealbook.nytimes.com/2012/12/19/as-unit-pleads-guilty-ubs-pays-1-5-billion-in-fines-over-rate-rigging/.
[34] Glenn S. Gitomer, "Auction Rate Securities: A Crisis Foretold," Securities Arbitration 2008: Evolving and Improving, The Practicing Law Institute, 2008.

Banks marketed ARS to investors as liquid investments and to issuers as a way to borrow for cheap, since the auctions were designed to drive rates down. However, to keep the market liquid, ARS auctions require bidders. If no investors submit bids at the auctions, then the entities that issued the debt could be forced to pay double-digit penalty interest rates to the bondholders that are unable to sell. That is precisely what happened in February 2008, when these auctions started to fail because there were no bidders for many ARS. The week of February 13-15, 2008, more than 80 percent of auctions failed.[35]

Some bond issuers saw interest rates on their ARS jump from 4.3 percent to 20 percent in just one week, because many ARS contracts included very high penalty rates that issuers had to pay investors who couldn't unload the bonds in what was supposed to be a liquid market.[36]

We now know that for years before the market crashed, banks were quietly propping up the ARS market by bidding in auctions so that the auctions wouldn't fail[37], creating an illusion of a strong, safe market.[38] We also know that banks continued to push these deals to public entities even when they knew the market was shaky.[39] For example, according to documents from an SEC complaint against Bank of America, as early as August of 2007, a senior Bank of America executive expressed concerns about a coming "meltdown" in the market. A month later, Bank of America sold Chicago Public Schools a huge deal involving ARS paired with swaps[40]—a deal estimated by the Chicago Tribune to have cost the financially struggling school district $100 million more than fixed rate bonds would have cost.[41] As the market got increasingly shaky, banks stopped propping it up—in other words, they stopped intervening in the auctions by bidding on the bonds—bringing on the very meltdown some had seen coming months earlier.[42] Like swaps, ARS were packed with hidden risks that were not widely understood by borrowers.

Many of the schools we examined paired ARS with swaps. After the ARS market failed and then, a few months later, the Fed lowered interest rates, many issuers found themselves paying high penalty interest rates on the ARS and high payments on the related swaps, while receiving very low payments from swap counterparty banks. Some issuers resorted to paying tens of millions of dollars to buy their own bonds back from investors to escape paying high interest rates.[43] For example, American University paid $74 million to buy back its own ARS bonds after the market froze.[44]

Why Did So Many Schools Get Involved in Such Bad Deals?

As we mentioned, colleges and universities were not the only bond issuers who made bad bets on swaps. Banks promoted these deals to nonprofit and municipal issuers of all sorts, from state governments to school districts, as a way to save money on borrowing. Municipal issuers are at a disadvantage in negotiating these very complex deals with banks, which could use their greater understanding to arrange terms to benefit themselves. Deane Yang, head of research at the New York-based debt management advisory firm Andrew Kalotay Associates, says it's an "uneven

[35] Stephanie Lee, "Auction-Rate Securities: Bidder's Remorse?" NERA Economic Consulting, May 6, 2008, accessed May 23, 2016, http://1547374.sites.myregisteredsite.com/Auction%20Rate%20History.pdf.
[36] Martin Z. Braun, "Auction-Bond Failures Roil Munis, Pushing Rates Up," Bloomberg, February 13, 2008.
[37] Liz Moyer, "Banks Back Down," Forbes, August 7, 2008, accessed May 23, 2016, http://www.forbes.com/2008/08/07/auction-rate-securities-biz-wallstreet-cx_lm_0807banks2.html.
[38] Mitchell L. Marinello and Christopher S. Moore, "The Collapse of the Securities Market," Novack and Macy, April 21, 2009, accessed May 23, 2016, http://www.novackmacey.com/the-collapse-of-the-auction-rate-securities-market/.
[39] Heather Gillers and Jason Grotto, "Banks Kept CPS in Shaky Auction Market," Chicago Tribune, November 10, 2014, accessed May 23, 2016, http://www.chicagotribune.com/news/watchdog/cpsbonds/ct-chicago-public-schools-bonds-banks-met-20141107-story.html.
[40] Ibid.
[41] Jason Grotto and Heather Gillers, "Risky Bonds Prove Costly for Chicago Public Schools," Chicago Tribune, November 7, 2014, accessed May 24, 2016, http://www.chicagotribune.com/news/watchdog/cpsbonds/ct-chicago-public-schools-bond-deals-met-20141107-story.html.
[42] See, for example, Heather Gillers, "Some Have Recouped Millions from Risky Type of Debt That Plagues CPS," Chicago Tribune, December 26, 2014, accessed May 24, 2016, http://www.chicagotribune.com/news/watchdog/cpsbonds/ct-cps-bonds-recoup-met-20141226-story.html#page=1.
[43] Jaqueline Doherty, "Auction Rate Securities: Still Frozen In Time," Barrons, March 28, 2015, accessed May 24, 2016, http://www.barrons.com/articles/auction-rate-securities-still-frozen-in-time-1427505026
[44] The school participated in six auctions for the Series 2006A bonds, purchasing a total of $38,625,000 of the bonds, and seven auctions for the Series 2006B bonds, purchasing a total of $41,150,000 of the bonds. American University, "American University Annual Report for year 2008-2009," p. 57, accessed April 27, 2016, http://www.american.edu/finance/AnnualReport/upload/2008-2009-Annual-Report.pdf.

playing field ... [an] inherently unfair situation. Basically you have a gullible counterparty and a much more sophisticated one."[45]

Similarly, Larry Lavendar, former chief of staff of the U.S. House's Financial Services Committee has compared some of the swap deals to the predatory home loans that helped collapse the economy in 2008 and identifies an "asymmetry of knowledge" between banks and bond issuers. He told the Chicago Tribune that banks would "find a location, craft a presentation, get somebody local to take them in to meet with the director of finance and tell them, 'Look at all these wonderful things we can do for you.'"[46]

In some cases, though, someone at a school may have just made a decision to gamble with the institution's money. Harvard, for example, was lead into its disastrous swap deal by former Secretary of the Treasury Larry Summers, who was Harvard's President at the time. In addition to the swaps, Summers, acting against the strong advice of the head of Harvard's endowment, played "a high-risk carry-trade game" with the school's endowment cash, costing it 30 percent of its $36.9 billion endowment.[47]

Toxic Swaps in Higher Education: Our Research

Nineteen student-lead case study projects examining the consequences of risky swap deals at a variety of institutions of higher learning—including private and public four-year colleges and one community college system—comprise the backbone of this report. In this section, we provide an overview of findings from these case studies. This summary is not comprehensive and does not discuss every school in our sample. Detailed case studies are available in the appendix.

But before we dive into the case studies, we must note the scope of the problem of toxic swaps at universities and colleges. To get a sense of how widespread the problem is, we took a random sample[48] from Forbes' list of "Top 500 American Colleges"[49] and combed the schools' financial statements for interest rate swaps in the last decade. Our focus on top 500 schools limits the scope of our findings (it does not include community colleges, for example), but insures that financial information is available for almost all institutions in the sample. We do not mean to extrapolate the findings of our random sampling beyond these institutions because a variety of factors including institution size and capital expenditures may impact the likelihood of swaps. In our sample, more than 58 percent of schools had engaged in interest-rate swaps.[50] This estimate may be conservative because schools' publicly available financial information may not reveal swaps even when they exist.

All of our 19 case study schools fit the trend of increasing tuition, and the public schools in our study have all been subject to cuts in public funding. At every one of the schools we looked at, interest rate swaps turned out to be a bad bet for the school, and a profit generator for the counterparty banks—hugely profitable and wealthy banks such as Goldman Sachs, Bank of America, JPMorgan Chase, Morgan Stanley, and Bank of New York Mellen. At these 19 schools, we found total swap costs of nearly $2.7 billion, and possible termination penalties of $808 million. At three additional schools, we found swaps but were not able to find enough information about them to do calculations.

Two of the private schools, Harvard and Cornell, were badly burned on swaps that never even served as hedges on debt. Both schools entered into swaps years before they planned to issue the bonds they intended to hedge, and

[45] Heather Gillers and Jason Grotto, "Illinois Lawmakers Opened the Door to Risky CPS Bond Deals," Chicago Tribune, November 11, 2014.
[46] Ibid.
[47] Felix Salmon, "How Larry Summers Lost Harvard 1.8 Billion," Reuters, November 29, 2009.
[48] Using stratified random sampling with sample size of 84 schools (57 private and 27 public).
[49] As defined by Forbes' "Top American Colleges" 2015 listing, Forbes, accessed April 27, 2016, http://www.forbes.com/top-colleges/list/.
[50] See appendix A for our full methodology on the swap survey.

both have paid huge termination fees to exit the swaps instead. Harvard notoriously paid $1.25 billion to get out of its swaps, and we found that Cornell has paid more than $280 million in swap payments and termination penalties, and faces up to $200 million more in penalties to end the remaining swaps.

When Harvard terminated swaps in fall of 2008, its counterparty banks were demanding cash collateral payments totaling almost a billion dollars. This is not an unusual feature of swap contracts, but, in Harvard's case, the demand for huge collateral payments at a time when the school was strapped for cash was another manifestation of the risk the school took when it signed the deals. Harvard opted instead to immediately borrow money to pay termination fees to the banks.[51]

In Michigan, seven out of eight of the largest public universities in the state had or have swaps on their books. Together the two largest, the University of Michigan and Michigan State, have spent about $215 million on swap payments and termination penalties.

Alabama State University, a historically black public college, could possibly lose its accreditation, in large part due to its financial situation. The school operated at a loss in 2013 and 2014, in part due to significant cuts in state funding and the costs of repaying debt.[52] At the same time, Alabama State University has spent more than $5 million on a swap. That's $5 million the school cannot afford to give away to a bank.

The University of Minnesota serves as an example—one of many—of a public school that has faced huge decreases in public funding, has increased its borrowing significantly, has subjected students to big increases in tuition, and has spent millions on swaps. The school paid $50 million in swap payments to Chase Bank. Its long term debt increased by 70 percent in constant dollars from 2006 to 2014, which by itself has greatly increased annual debt interest payments. Sixty-two percent of students at the University of Minnesota who graduate with bachelor degrees have student loan debt—a 20 percent increase over the last eight years—meaning more profits for Wall Street at the expense of higher education.

The University of Minnesota has instituted a "capital enhancement fee" of $75 per student per term on the Twin Cities campus—that's $150 per year for Fall and Spring Semester students—to pay for "long-term capital financing for the renewal of facilities or construction of new facilities that contribute to or enhance student life."[53] The school also charges students $25 per year for a stadium fee, which supports the construction costs and debt service of the on-campus football stadium.[54] Meanwhile, toxic swaps are costing the University of Minnesota $3.5 million a year in net payments to JPMorgan Chase.

Several of the schools in our sample paired swaps with auction rate securities. Georgetown University paired ARS with swaps, with Lehman Brothers as counterparty. When the auction market failed, Georgetown found itself paying penalty interest rates of 15 percent on the ARS, in addition to the high fixed rates it paid Lehman on the swaps. On top of that, Lehman's bankruptcy triggered termination clauses in the school's swap contracts, and Lehman demanded Georgetown pay termination penalties. Georgetown paid Lehman $53 million, but Lehman later came back for more, claiming Georgetown had underpaid on the termination fees, and dragging Georgetown into an Alternative Dispute Resolution process. The parties reached a settlement in 2015.

[51] Michael McDonald, John Lauerman, and Gillian Wee, "Harvard Swaps Are So Toxic Even Summers Won't Explain," Bloomberg, December 18, 2009.
[52] Alabama State University, "Alabama State University Audited Financial Report 2014," p. 24, accessed May 23, 2016, www.alasu.edu/download.aspx?id=12732.
[53] University of Minnesota, "University of Minnesota One Stop Student Services, General Fees 2015-2016," accessed April 27, 2016, http://onestop.umn.edu/finances/costs_and_tuition/fees/general_fees/index.html.
[54] Ibid.

American University also paired ARS with swaps. When the ARS market froze, American paid $74 million to buy its own bonds back to avoid the high interest rates it had to pay on the market.[55] American's swaps cost the school more than $91 million to date,[56] and American would have to pay more than $76 million (as of 2015) to exit the swaps that are still on the books.

The Lehman bankruptcy was a key moment in the financial meltdown of 2008. Lehman's irresponsible behavior not only helped bring on the Great Recession, its collapse was also an important moment in the chain of events that ultimately led to the intervention of the Federal Reserve, which lowered interest rates. Lehman aggressively pursued additional termination fees from colleges and other nonprofits as part of its bankruptcy case—though it bore much of the responsibility for the circumstances that made the swaps toxic for borrowers such as Georgetown. This is a bit like a drunk driver crashing into your house and then suing you for her injuries.

American is also a good example of the powerful role that bankers often play at colleges and universities. Several members of the finance industry sit on American's board, including high-level people at Goldman Sachs and JPMorgan Chase. Some of these same financial companies are involved in American's swap deals, as bond underwriters and/or swap counterparties.[57] For example, a high-level executive at Bank of America sat on the board during the period that American entered into its two toxic swaps with Bank of America.

Another example of bankers on boards is at the University of California, where a research team led by Charlie Eaton identified several possible conflicts of interest with University of California leaders in 2012. For example, the school's Regent and former Regents Finance Committee Chair Monica Lozano at the time had received approximately $1.5 million in compensation as a member of the Bank of America Board of Directors. Bank of America stood to pocket as much as $28 million from one of the University of California swaps.[58]

The State of Illinois has spent $618 million on toxic swaps, $61 million of which was for University of Illinois swaps. The state of Illinois is a good example of the financial industry writing legislation that benefits itself at the expense of governments and other bond issuers. The legislation that made many of the state's swap deals possible was written by an attorney and passed by a legislature that didn't understand what they were approving. The bill's sponsor, Illinois Senator John Cullerton, told legislators that he had a limited grasp of the bill and said he hoped nobody had any questions. The attorney who wrote the first draft of the bill said that the goal was to, as the Chicago Tribune put it, "expand borrowing opportunities for governments and potentially generate business for his firm." It's worth noting that these complicated deals are generally more lucrative for banks and law firms than traditional borrowing.[59]

We have two stories about bad deals hurting community colleges. First, the Peralta Community College District, consisting of four campuses in the San Francisco East Bay, signed a six-swap deal with Morgan Stanley. Like Harvard and Cornell, Peralta's deal includes swaps with starting dates years after the deal was signed, including one that starts in 2039, more than 30 years later. This means that Peralta committed to interest rates on swaps that

[55] The school participated in six auctions for the Series 2006A bonds, purchasing a total of $38,625,000 of the bonds, and seven auctions for the Series 2006B bonds, purchasing a total of $41,150,000 of the bonds. American University, "American University Annual Report for year 2008-2009," p. 57, accessed April 27, 2016, http://www.american.edu/finance/AnnualReport/upload/2008-2009-Annual-Report.pdf.
[56] The total interest rate costs are $91,962,486.34.
[57] American University, "American University Annual Report for the year 2014-2015," p. 32, accessed May 1, 2016, http://www.american.edu/finance/AnnualReport/upload/Annual_Report_2014-2015-2.pdf.
[58] Charlie Eaton, Jacob Habinek, Mukul Kumar, Tamera Lee Stover, and Alex Roehrkasse, "Swapping our Future: How Students and Taxpayers Are Funding Risky UC Borrowing and Wall Street Profits," Berkeley Press, 2011, accessed May 25, 2016, http://publicsociology.berkeley.edu/publications/swapping/swapping.pdf.
[59] Heather Gillers and Jason Grotto, "Lawmakers Opened Door to Risky CPS Bond Deals," Chicago Tribune, November 11, 2014.

wouldn't kick in for another 30 years. This was a huge and unusual gamble, and raises serious questions about how well the district understood the deals it was signing. In 2011, facing million in cuts, Peralta community members, teachers, staffers, and custodians sent a letter strongly encouraging Morgan Stanley to negotiate with Peralta's Board of Trustees to end the swap contracts, eliminate the termination fee with no damage to the district's credit rating, and put public education above profits. However, five years later, the costly toxic swaps are still on Peralta's books, and Morgan Stanley is still collecting millions each year. As of December 2015, the swaps activated thus far are costing Peralta just under $2 million per year and have cost the district $5.6 million in net swap payments since the first swap started in 2010.[60]

The second story is about a different type of bad deal: capital appreciation bonds. A capital appreciation bond is a long-term bond with compounding interest on which the borrower is unable to make any principal or interest payments for the first several years, and, in some cases, until the final maturity of the bond. In this way, it is similar to a negative amortization mortgage, in which the outstanding principal actually grows over time because the unpaid interest gets tacked onto the amount owed and compounds. Because of this structure, borrowers often end up paying extraordinary amounts of interest over the life of the bonds.

Public colleges—especially community college districts hit by years of funding decreases—have been particularly vulnerable to these funding schemes. The Los Angeles Times created a database of California school capital appreciation bonds, which we used to examine some of the community college deals.[61] We found community college capital appreciation bonds with maturity lengths of up to 40 years and principal to payout ratios of up to 1:13. This means that some community colleges will pay 13 times more than the amount they originally borrowed in fees. (A typical vanilla 30-year fixed rate bond might have an original principal to payout ratio of 1:2.) When we filtered for capital appreciation bonds with more than a 1:4 ratio (the limit imposed by a 2013 California law) we found that these schools will pay $2.3 billion to borrow only $343 million, with an average debt ratio of 1:7. In one example, Victor Valley Community College District borrowed $21 million, which will become a debt of more than $237 million. Those are taxpayer dollars, shifted from community college budgets to banks and to bond investor profits.

Conclusions and Recommendations

Bad Wall Street deals are siphoning money out of the budgets of colleges and universities across the country. This problem is compounded by similar deals at the state level, which have damaged state budgets and decreased state funding of higher education (among many other things). The banks responsible for selling these deals to schools have largely gotten off the hook, benefiting in part from lack of transparency around the deals. Most students and other stakeholders have no idea how much their schools have paid—and are still paying—for these deals, nor how much banks are profiting at their expense.

These toxic deals are one symptom of the larger problem of the financialization of education. We have focused most of our attention on interest rate swaps as the most visible example of toxic financial deals, but these deals are the tip of a very large iceberg. There is a myriad of expensive financial products and fees we were not able to discuss here, including products such as credit enhancements and swap and bond insurance, and services such as bond

[60] Net cost to date as of December 2015 is $5,655,912. The current annual cost, based on notional and interest rates as of December 2015, is $1.9 million/year based on multiplying a monthly cost of 158,000 per month by 12.
[61] Maloy Moore, Doug Smith, Dan Weikel, and Ben Welsh, "Capital Appreciation Bonds Spreadsheet," Los Angeles Times Data Desk, accessed May 1, 2016, http://spreadsheets.latimes.com/capital-appreciation-bonds/.

underwriting and remarketing. A full accounting of all of these costs would reveal significant sums of money going to Wall Street.

Recommendations for Schools with Bad Deals

The Fair Dealing Rule- MSRB Rule G-17

The Municipal Securities Rulemaking Board (MSRB) is one of the federal regulatory agencies charged with protecting municipal borrowers. Under MSRB Rule G-17, known as the fair dealing rule, banks that pitch financial products such as interest rate swaps to municipal borrowers have a duty to deal fairly with them. That includes making sure that borrowers actually understand the risks they are taking, not simply asking them to sign a disclosure. As a general practice, banks did not do this. They downplayed the risks and highlighted the savings that borrowers would enjoy if none of the risks associated with these highly risky deals materialized. This was disingenuous, and likely violated Rule G-17. This means that schools may have legal options they could pursue, not only to get out of remaining swaps without paying penalty fees, but even to recoup costs from swaps and ARS.

Banks likely violated Rule G-17 by

- Failing to adequately explain and quantify the risk that payments on the bonds might exceed the payments received under the swaps;
- Encouraging public entities to enter swaps with extremely long durations that would have been radically off-market in the private sector;
- Failing to explain and quantify to public entities exactly how known risks, such as downgrades of bond insurers, might affect the value of interest rate swaps;
- Failing to disclose that several of the underwriting banks were rigging the interest rates (i.e., the LIBOR index) that the floating payments on the swaps were based on.
- Failing to disclose that several of the underwriting banks were rigging the interest rates (i.e., the ISDAfix rate) that the termination fees on the swaps would be based on.

What schools can do

- Conduct an audit to determine what additional costs the school may have borne due to illegal manipulation of LIBOR. Schools with swaps linked to LIBOR should explore the possibility of LIBOR litigation.
- Investigate their legal options for getting out of deals without further penalty and for recouping costs.
- Ask the Securities and Exchange Commission to investigate their school's deals, looking in particular for bank violations of Rule G-17.
- Investigate to see if there are state level legal options available to your school (this may vary by state, and you'll want to check statutes of limitations).
- Institute a policy of transparency around the costs of banking services and financial deals.
- Make every effort to get out of existing interest rate swaps without paying penalties. Schools can ask counterparty banks to renegotiate deals or end deals without termination penalties, under threat of the institution refusing to do business with that bank again.

Recommendations for Students and Other Stakeholders

What Students and Other Campus Stakeholders Can Do

- Find the bad deals that are draining money out of their campuses by doing research similar to what we've done in this report.
- Research their school's Board of Trustees or other governing bodies to determine who is connected to the finance industry and map out possible conflicts of interest.

- Demand transparency at their institutions and ask the school to disclose what it spends on banking and borrowing. As a first step, the school can make this information easily accessible, but students can demand the school do a full audit of these costs and make the audit public.
- Demand that schools disclose any conflicts of interest, such as bankers on boards of directors or in other positions of influence at the school.
- Demand that their school's administration prioritize students and other campus stakeholders over banks and investors by taking action to exit existing bad deals without further expense.
- Demand that their administration investigate their legal options, particularly in regards to Rule G17 violations, for recouping money spent on bad deals.
- Demand that their school's administration ask the Securities and Exchange Commission to investigate their school's bad deals, especially considering Rule G-17 violations.
- Demand tuition or fee freezes until the school takes action on its bad deals.

Appendix

Detailed Case Studies

Alabama State University

- In-State Tuition and Fees 2004: $4,008
- In-State Tuition and Fees 2015: $9,220
- Out-of-State Tuition and Fees 2004: $8,016[62]
- Out-of-State Tuition and Fees 2015: $16,160[63]
- A historically black public university located in Montgomery, Alabama
- Total 2015-16 Enrollment: 4,803 undergraduate, 707 graduate[64]
- Swap Money Paid Out: $5.4 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 585[65]

In June 2014, the Southern Association of Colleges and Schools, an academic accreditation agency, put Alabama State University on "Warning" status. The Southern Association of Colleges and Schools' report listed Alabama State University's financial instability as one of its biggest concerns. Universities may be on Warning status for a maximum of two years before they must either be placed on probation or lose their accreditation status, the latter of which would essentially force Alabama State University to close its doors.

On August 27, 2004, the Alabama State University issued $24.4 million in auction rate securities, and took out a swap with JPMorgan Chase.[66] Auctions on that bond failed in 2008, but Alabama State University didn't refinance or call the bond like many other schools with ARS bonds did. That has left the 2004 bond in failed auction rate mode,[67] where interest rates spiked as high as 7%.[68]

[62] National Center for Educational Statistics IPEDS Data Center, "Alabama State University (UnitID: 100724) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[63] Alabama State University, "Alabama State University Tuition and Costs 2015-2016," accessed May 1, 2016, http://www.alasu.edu/cost-aid/tuition--costs/index.aspx.
[64] "Alabama State University," U.S. News and World Report, accessed May 1, 2016, http://colleges.usnews.rankingsandreviews.com/best-colleges/alabama-state-university-1005.
[65] We arrived at this figure by dividing the swap costs at ASU (5.4 Million) by the schools' most recently available tuition and fees costs (in state: $9,220) to discover the number of full time educations that could have been paid for by the cost of the swaps. This methodology was used in every subsequent FTE calculation.
[66] Electronic Municipal Market Access, "Alabama State University General Tuition and Fee Revenue Bond Series 2004," accessed May 1, 2016, http://emma.msrb.org/MS224831-MS200139-MD388649.pdf.
[67] Electronic Municipal Market Access, "Alabama State Audited Financial Report 2012", p. 40, accessed May 1, 2016, http://emma.msrb.org/EA579278-EA452187-EA848029.pdf.
[68] Bloomberg L.P., "Auction Rates for Alabama State University General Tuition and Fee Revenue Bonds Series 2004," accessed May 2nd, 2016.

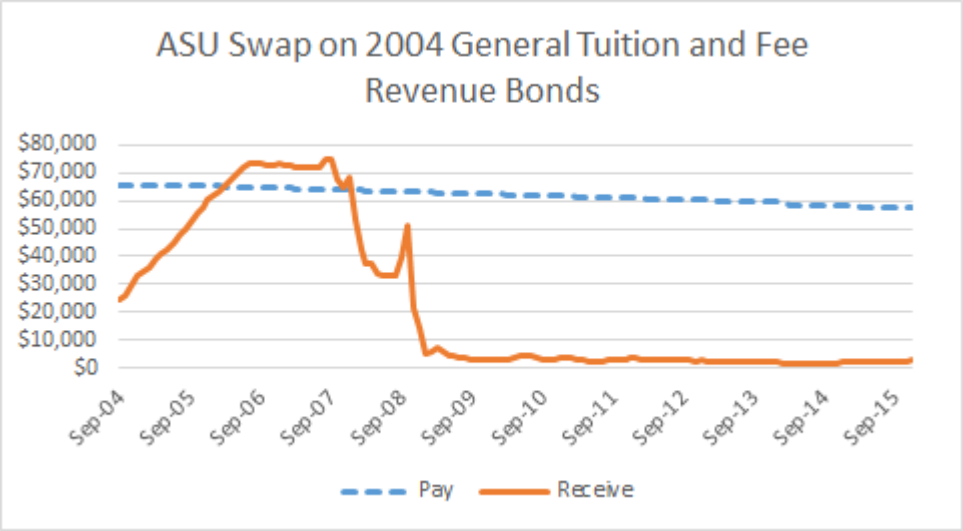


Figure [4] shows Alabama State University monthly payments on 2004 interest rate swaps, in dashes, versus rate received from JPMorgan, in a solid line.

Alabama State University has faced numerous financial obstacles over the past several years, many of them stemming from severe loss of state funding. For instance, Alabama State University received $54.7 million from the state of Alabama for fiscal year 2010-2011. For fiscal year 2014, however, the university received only $44 million from the state. The school operated at a loss of nearly $47 million in 2014 and more than $48 million in 2013, in part because of the more than $6 million annual costs in repaying past borrowing.[69]

The swap, in this case, is a small portion of a financialization story that includes a school falling farther and farther behind and borrowing more and more to cover budget gaps. Series 2004 bonds were originally issued to provide funding for needed construction projects to match Alabama State University's growing student population, and the school has paid over $5 million on a swap that was intended to phase out risk from the issued bonds.

American University

- Tuition and Fees 2004: $25,920
- Tuition and Fees 2015: $43,103[70]
- A private research institution in Washington, D.C.
- Total 2015-16 Enrollment: 7,259 undergraduate, 3,643 graduate[71]
- Swap Money Paid Out: $92 million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 2133

American University is a tuition-dependent institution. Unlike schools such as Princeton, Yale, or Swarthmore, which have endowments producing large enough returns to fund large portions of the school's operations, American draws nearly 80 percent of its operating budget from tuition and fees.[72] American University is one of the

[69] Alabama State University, "Alabama State University Audited Financial Report 2014," p. 24, accessed May 25, 2016, www.alasu.edu/download.aspx?id=12732.
[70] America University, "American University Tuition Table 2015-2016," accessed May 2, 2016, http://www.american.edu/finance/studentaccounts/Tuition-and-Fees-Information.cfm.
[71] America University, "About AU: Fast facts," accessed May 2, 2016, http://www.american.edu/about/fast-facts.cfm.
[72] American University, "American University Annual Report for the year 2014-2015," p. 32, accessed May 2, 2016, http://www.american.edu/finance/AnnualReport/upload/Annual_Report_2014-2015-2.pdf.

most expensive colleges in the country, and it is located in a city with a high cost of living. The school has been criticized for not providing enough financial aid to cover all the costs of living and studying in D.C.

American's swaps have cost the school more than $91 million to date,[73] and American University would have to pay more than $76 million (as of 2015) to exit the swaps that are still on the books.

One of the more pernicious aspects of the financialization of higher education has been the increase of bankers in decision-making positions at colleges and universities. The Board of Trustees at American University has several members of the finance industry on it—including high-level people at Goldman Sachs and JPMorgan Chase.[74] Some of these same institutions are involved in the swap deals, as bond underwriters and/or swap counterparties.[75] For example, a high-level executive at Bank of America sat on the board during the period that American entered into its two toxic swaps with Bank of America.

As tuition continues to rise, students are taking out private loans to pay for school. The average debt for the 12.4 percent of the graduating class of 2014 who chose to take out private loans was $45,249.[76] Banks make a profit from the interest they charge students on these loans. At the same time, American University is also paying back the banks—using money students borrowed from the same banks. Some of these banks are also profiting from the interest rate swap deals.

American's 2003 and 2006 ARS bonds, both of which had portions of their total under swap, were converted to more vanilla variable rate bonds in 2008.[77] This conversion happened in response to the ARS market freeze, but before the conversion could be completed, the university resorted to buying back its own ARS payments in auctions between April 9, 2008, and May 21, 2008. American had to pony up at least $74 million dollars to buy the bonds back when the auctions failed, in addition to paying the fees to convert the ARS bonds and other costs related to restructuring the deals.[78]

The American University Board of Trustees should use its close connections with the finance industry to negotiate better deals on the remaining swaps.

Please see the extended methodology section in the appendix for details on how we calculated American's net swap costs.

Carnegie Mellon

- Tuition and Fees 2004: $31,036[79]
- Tuition and Fees 2016: $52,310[80]
- A private research institution in Pittsburgh, Pennsylvania
- Total 2015-16 Enrollment: 6,362 undergraduate, 7,141 graduate[81]
- Swap Money Paid Out: $34 million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 748[82]

[73] The total interest rate costs are $91,962,486.34.
[74] American University, "Current Trustees," accesed May 2, 2016, http://www.american.edu/trustees/Current-Trustees.cfm.
[75] American University, "American University Annual Report for the year 2014-2015," p. 32.
[76] American University, "College Affordability: AU and Your Educational Goals," accessed May 2, 2016, http://www.american.edu/initiatives/collegeaffordability/taking-charge-of-your-college-costs.cfm.
[77] American University, "American University Annual Report for year 2008-2009," p. 56, accessed May 2, 2016, http://www.american.edu/finance/AnnualReport/upload/2008-2009-Annual-Report.pdf.
[78] The school participated in six auctions for the Series 2006A bonds, purchasing a total of $38,625,000 of the bonds, and seven auctions for the Series 2006B bonds, purchasing a total of $41,150,000 of the bonds. American University, "American University Annual Report for year 2008-2009," p. 57, accessed May 2, 2016, http://www.american.edu/finance/AnnualReport/upload/2008-2009-Annual-Report.pdf.
[79] National Center for Educational Statistics IPEDS Data Center, "Carnegie Mellon University (UnitID: 211440) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[80] Carnegie Mellon University, "Tuition and Fees," accessed May 2, 2016, http://admission.enrollment.cmu.edu/pages/tuition-fees.
[81] Carnegie Mellon University, "Carnegie Mellon fact sheet," accessed April 16, 2016, http://www.cmu.edu/ira/EnrollmentFacts/pdf/fall-2015-pdfs/enrollment-facts-2015-enrollment-by-location.pdf.
[82] Carnegie Mellon University, "Tuition and Fees."

Interest rate swap deals have cost Carnegie Mellon over $39 million since 2004.[83]

Carnegie Mellon has entered five variable-to-fixed rate swaps (three with JPMorgan Chase as the counterparty and two with PNC Financial bank as the counterparty). Carnegie Mellon took out a $100 million bond in 2006 to fund construction and refund previous debts, and hedged it with a swap.[84] This particular hedge cost the school $24 million in net swap payments, doesn't end until 2028, and would cost $34 million in termination penalties to end now.

The City University of New York

- In-State Tuition and Fees for CCNY, the university flagship, in 2004: $4,259
- In-State Tuition and Fees for CCNY, the university flagship, in 2016: $6,330
- Out-of-State Tuition and Fees 2004: $8,899[85]
- Out-of-State Tuition and Fees 2015: $17,210[86]
- The urban university system of New York City
- Total 2014-15 enrollment: 245,646 undergraduate 29,486 graduate[87]
- Swap Money Paid Out: $198.7 million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 31,383

The City University of New York system is the largest urban university in the U.S., consisting of 13 four-year colleges and seven community colleges. The City University of New York is publicly funded, receiving state and city monies.

State funding has been decreasing for the City University of New York system for years. For example, between 2008 and 2010, the state slashed funding to the system's 13 senior colleges by $250 million.[88] More recently, the 2016 state budget included a $485 million cut (or about a third of the remaining state funding) until political pressure forced Gov. Andrew Cuomo to write the City University of New York system back into the budget.[89] These cuts have been a part of the story of financialization at the City University of New York because the system has had to borrow more and more to make ends meet as city and then state funding decreased.

One consequence of some of that borrowing was that the City University of New York system got in deep water with swaps. With swaps on more than one billion dollars before the 2008 crash, $930 million of which were to hedge ARS, the system has spent an estimated $198.7 million on swaps since 2003, including termination fees.

The City University of New York system entered a total of 46 swaps with four different banks on more than a billion dollars in borrowing in 2003.[90] The lion's share of the underlying debt was in ARS bonds with a principle of nearly one billion dollars.[91] Like many other ARS bonds, this one was refinanced in 2008 after the ARS market froze. Around this time, the system's swaps underwent some dramatic changes.

[83] The final number is 39,154,537.11.
[84] Carnegie Mellon University, "Annual Report 2006. Rep. Carnegie Mellon University," October 8, 2006, accessed April 16, 2016.
[85] National Center for Educational Statistics IPEDS Data Center, "CUNY City College (UnitID: 190567) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[86] Carnegie Mellon University, "Bursar Tuition and Fees 2016," accessed April 16, 2016, https://www.ccny.cuny.edu/sites/default/files/Bursar%20Tuition%20and%20Fees%20Spring%202016%20Term%20-%202.pdf.
[87] College Data, "College Data for City College of New York," accessed April 16, 2016, http://www.collegedata.com/cs/data/college/college_pg03_tmpl.jhtml?schoolId=405.
[88] New York PERG, "Protecting Funding for Higher Education," accessed April 16, 2016, http://www.nypirg.org/higher_ed/funding.html.
[89] Brandon Jordon, "State budget keeps funding for CUNY," The Knight News, April 13, 2016, accessed May 2, 2016, http://www.theknightnews.com/2016/04/13/state-budget-keeps-funding-for-cuny/.
[90] The Dormitory Authority of the State of New York (DASNY), a state agency, was the group that issued bonds on behalf of the CUNY system, and much of the useful disclosure about swaps comes from DASNY documentation. Dormitory Authority of the State of New York, "Basic Financial Statement 2007," p. 39, 40, accessed May 25, 2016, http://www.dasny.org/Libraries/Documents_-_About/basicfs.pdf.
[91] Electronic Municipal Market Access, "Dormitory Authority of the City of New York, City University System Consolidated Revenue Bonds Official Statement," accessed May 2, 2016, http://emma.msrb.org/MS205247-MS180555-MD350006.pdf.

On March 28, 2008, the City University of New York system terminated five swaps with four counterparties, paying about $5 million in termination fees.[92] Later in 2008, the Lehman Brothers collapse triggered termination clauses in the remaining Lehman swaps.[93] Finally, as a result of the ARS market freezing completely and the system's decision to refund some of the ARS with fixed rate debt, it terminated 12 more swaps over the course of 2009. The remaining swaps appear to have been rolled over to new variable rate 2008 bonds,[94] which refinanced much of the 2003 borrowing.

Estimates on how much the City University of New York system spent on the termination of all those swaps are hard to make because the DASNY authority responsible for all of the system's borrowing report their actions in bulk without delineating which "customer" each swap was attached to. Still, even with conservative estimates, termination fees were nearly $20 million, which pushes the overall cost of swap deals past the $190 million mark, more than the tuition increases for every single student in 2014.

When the City University of New York system spends money, its borrowing is too often focused on investing in new buildings, not on students' day-to-day needs. A new science center on the CCNY campus (the flagship college in the system) is estimated to cost $648 million,[95] while students on campus struggle with problems such as a lack of toilet paper in women's bathrooms.[96] When big budget items (and the subsequent costs of borrowing) eclipse the daily management of an institution, current students struggle even while the glitzy external image of the institution improves.

Columbia University

- Tuition and Fees 2004: $31,472[97]
- Tuition and Fees 2015: $49,138[98]
- A private research university in Upper Manhattan, New York City
- Total 2015-16 Enrollment: 8,074 undergraduate, 20,530 graduate[99]
- Swap Money Paid Out: $69,623,466
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 1,417

Columbia University pledges to provide need-based financial aid through a need-blind admissions process for undergraduates.

Columbia revised its financial aid policies to meet full need without offering loans as part of financial aid packages at the beginning of the 2008-2009 academic year.[100] Today, 50 percent of Columbia undergraduates receive need-

[92] The termination resulted in a swap termination payment to the counterparties in a total amount of $4,967,600. Dormitory Authority of the State of New York, "Basic Financial Statement 2008," p. 107, accessed May 2, 2016, http://www.dasny.org/Libraries/Documents_-_About/DAannual08.pdf.
[93] On September 23, 2008, DASNY terminated the Lehman Brothers swaps associated with CUNY third resolution series 2003 subseries D, E, F and CUNY fifth resolution 2003 subseries 1, 2, 3, and 4. Termination fees of $4,760,672 were paid to Lehman as a result of that termination. The City University of New York, "City University of New York Basic Financial Statement 2008," p. 55, accessed May 2, 2016, https://www.cuny.edu/about/administration/offices/bf/uc/uc-links/Financial_Statements_2008.pdf.
[94] The information available from DASNY suggests that, "...at various times during 2009, the Authority fully terminated 25 and partially terminated 1 pay-fixed, receive-variable swaps with 6 counterparties in a total notional amount of $1,141,381,879." The CUNY swaps that were terminated as a part of this process had a notional amount of $293,177,000. The total cost of the terminations resulted in payments of $63,969,792. The CUNY swaps were 25 percent of the overall total, meaning our estimate is that CUNY paid $16,431,373 in termination fees from that total. Dormitory Authority of the State of New York, multiple statements.
[95] Dormitory Authority of the State of New York, "CCNY Science Building/CUNY ASRC Project report," p. 6, accessed May 2, 2016, http://www.dasny.org/Libraries/About_SEQR_PDFs/5_ASRC_EIS_Chapter_1_Project_Description.pdf.
[96] Alyssia Osorio, "I did everything I was supposed to do," The Indypendent, March 4, 2016, accessed May 25, 2016, https://indypendent.org/2016/03/04/cuny-students-speak-out.
[97] National Center for Educational Statistics IPEDS Data Center, "Columbia University in the City of New York (UnitID: 190150) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[98] My Future, "Columbia University in the City of New York," accessed May 2, 2016, http://www.myfuture.com/schools/cost/columbia-university-in-the-city-of-new-york_190150.
[99] Ibid.
[100] "Columbia Expands Financial Aid for Wide Range of Lower- and Middle-income Undergraduates," Columbia News, March 11, 2008, accessed May 25, 2016, http://www.columbia.edu/cu/news/08/03/FinancialAid.html.

based financial aid, and 17 percent receive federal Pell Grants, a needs-based grant for low-income students.[101] In 2006-07, undergraduate financial aid spending per student was $9,227. In 2014-2015 year, it was $17,665. Columbia has nearly doubled aid over ten years. Over this span of time, the fraction of aid coming from Columbia's resources, as compared to external resources, has fluctuated greatly.

Despite the claims of full needs-based financial aid, 25 percent of Columbia undergraduates take out student loans. Many students who take out loans are part of Columbia's School of General Studies, which is comprised of non-traditional students who are not guaranteed full-need support. Nevertheless, a smaller and growing portion of traditional college students take out loans each year.

Over the same period of time, Columbia entered one large swap, taken out in 2008 to hedge $200 million in underlying bonds.[102] This swap has resulted in just under $70 million in costs for the university,[103] and the swap won't end until 2038, unless the school pays $68.2 million in termination penalties.[104] It would be easier for Columbia to meet its guarantee of support if it were not diverting resources to banks for bad deals.

Cornell University

- Tuition and Fees 2004: $30,167[105]
- Tuition and Fees 2016: $50,953[106]
- A private federal land-grant doctoral university in Ithaca, New York
- Total 2015-16 Enrollment: 14,315 undergraduate, 7,589 graduate[107]
- Swap Money Paid Out: $280,307,000
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 5,501

Cornell University is a public/private research university in Ithaca, New York. With an enrollment of 14,315 students[108] between its seven undergraduate colleges, Cornell is the largest of the Ivy League schools. Cornell is unique in that, of its seven undergraduate colleges, four are considered to be private, while the other three (the College of Agriculture and Life Sciences, the College of Human Ecology, and the School of Industrial and Labor Relations) are "contract colleges." Contract colleges are operated by private institutions on behalf of the state, and receive significant state funding. Cornell has an endowment of $6.3 billion as of October 2015.[109]

Since 2000, Cornell has had 11 interest rate swaps with banks including Morgan Stanley, Goldman Sachs, Bank of America-Merrill Lynch, JPMorgan Chase, and Bank of New York Mellon, on over $1.5 billion of underlying debt. Even though Cornell entered these swaps to protect against rising interest rates on variable-rate bonds, the university never ended up issuing the underlying debt. However, because it had already entered into the swap contracts, it was locked into these "unattached swaps" anyway. The last of these swaps doesn't end until 2044, meaning that Cornell locked itself into these losing deals for nearly four decades, unless it pays huge termination penalties. These swaps are not serving their intended purpose as a hedge on variable rate debt, but instead are just draining money out of Cornell's budget.

[101] Columbia Undergraduate Admissions, "Columbia by the Numbers," accessed May 2, 2016, https://undergrad.admissions.columbia.edu/learn/numbers.
[102] Electronic Municipal Market Access, "Dormitory Authority of the State of New York, Columbia University Revenue Bonds Series 2008A Official Statement," accessed May 2, 2016, http://emma.msrb.org/MS269694-MS265843-MD517898.pdf.
[103] Columbia University, "Columbia University Audited Financial Statement 2015," p. 15, accessed May 2, 2016, http://finance.columbia.edu/files/gateway/content/reports/financials2015.pdf.
[104] Ibid.
[105] National Center for Educational Statistics IPEDS Data Center, "Cornell University (UnitID: 190415) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[106] Cornell University Financial Aid, "Cost to Attend 2016-2017," accessed May 2, 2016, http://finaid.cornell.edu/cost-attend.
[107] Cornell University, Division of Budgeting and Planning, "Common Data Set Fall 2015," accessed May 2, 2016, http://dpb.cornell.edu/documents/1000567.pdf.
[108] Cornell University, "Cornell University Factsheet," accessed May 2, 2016, http://irp.dpb.cornell.edu/tableau_visual/factbook-enrollment.
[109] Janet Lorin, "Cornell Endowment Posts 3.4% Annual Return, Lowest Among Ivies," Bloomberg, October 8, 2015, accessed May 25, 2016, http://www.bloomberg.com/news/articles/2015-10-08/cornell-endowment-posts-3-4-annual-return-lowest-among-ivies.

Six of the eleven original swaps are still active. According to Cornell's 2015 annual financial report, the university experienced an operating loss of $25 million in fiscal year 2015, over $20 million of which was interest expense associated with the "unattached interest rate swaps." The report says that Cornell has a "multi-year plan to gradually terminate these unattached swaps."[110] This most likely means they will pay termination penalties to end the deals. As of the end of fiscal year 2015, it would have cost Cornell more than $206 million in penalties to terminate its remaining swaps.[111]

Cornell has paid more than $63 million in penalties for swaps it has already terminated.[112] The first termination was in 2010, a year after the university's endowment took a $26 million hit and state aid declined, contributing to operating deficits and a decision to scale back on planned projects that the university would have issued debt to pay for.[113]

Between 2000 and the end of 2015, Cornell spent approximately $217 million in net swap payments, more than $100 million of which has been on the unattached swaps with no underlying debt. The total cost of the net swap payments and the termination penalties that have already been paid, as of the end of 2015, was more than $280 million. Cornell instituted a mandatory $350 fee for all students who opt not to purchase the school's health insurance, effective at the beginning of the 2015-2016 school year.[114] In fiscal year 2015, the year the fee was announced, Cornell spent approximately $33 million on swap payments, $28 million of which was due to the unattached swaps. Even if every student paid the health fee, it would bring in only $4.9 million dollars a year—a drop in the bucket compared to the $280 million the school has already spent on swaps.

Please see the extended methodology section in the appendix for details on how we calculated Cornell's net swap costs.

Fordham University

- Tuition and Fees 2004: $27,047[115]
- Tuition and Fees 2015: $46,932[116]
- A private Jesuit research university in New York City
- Total 2015-16 Enrollment: 8,855 undergraduate, 6,431 graduate[117]
- Swap Money Paid Out: $22.2 million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 472

Fordham University has one swap, originally entered in 2005 on a 2005 ARS bond and later transferred with slight changes to a 2008 bond, which were used to refund the 2005 bonds after the ARS market froze.

[110] Joanne M. DeStefano, "Message From The Vice President For Finance And Chief Financial Officer," Cornell University Annual Financial Report 2014-2015, p. 6, accessed May 2, 2016, https://www.dfa.cornell.edu/sites/default/files/cornell-financial-report-fy2015.pdf.
[111] Cornell University, "Cornell Annual Financial Report, 2014-2015," p. 38, accessed May 2, 2016, https://www.dfa.cornell.edu/sites/default/files/cornell-financial-report-fy2015.pdf
[112] Cornell University. Termination figures are in various Annual Financial Statements, including p. 8, 36 and 37 of 2014 AFR; p. 78 of 2013 AFR; p. 72 of 2011 AFR; and p. 69 of 2010 AFR, https://www.dfa.cornell.edu/about-us/reports/.
[113] Michael McDonald, "Cornell University Follows Harvard in Ending Swaps," Bloomberg, May 18, 2010, accessed May 25, 2016, http://www.bloomberg.com/news/articles/2010-05-18/cornell-university-to-follow-harvard-in-using-debt-proceeds-to-exit-swaps.
[114] Matthew Hayes, "Cornell Stands Firm on New Health Fee," Ithaca Journal, February 12, 2015, accessed May 25, 2016, http://www.ithacajournal.com/story/news/local/2015/02/12/cornell-health-fee-fight/23316265/.
[115] National Center for Educational Statistics IPEDS Data Center, "Fordham University (UnitID: 191241) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[116] Fordham University, "Fordham College at Rose Hill 2015-2016," accessed May 2, 2016, http://www.fordham.edu/info/21259/tuition_and_fees/5705/fordham_college_at_rose_hill.
[117] Fordham University, "Fordham Facts," accessed May 2, 2016, http://www.fordham.edu/info/20088/fordham_facts.

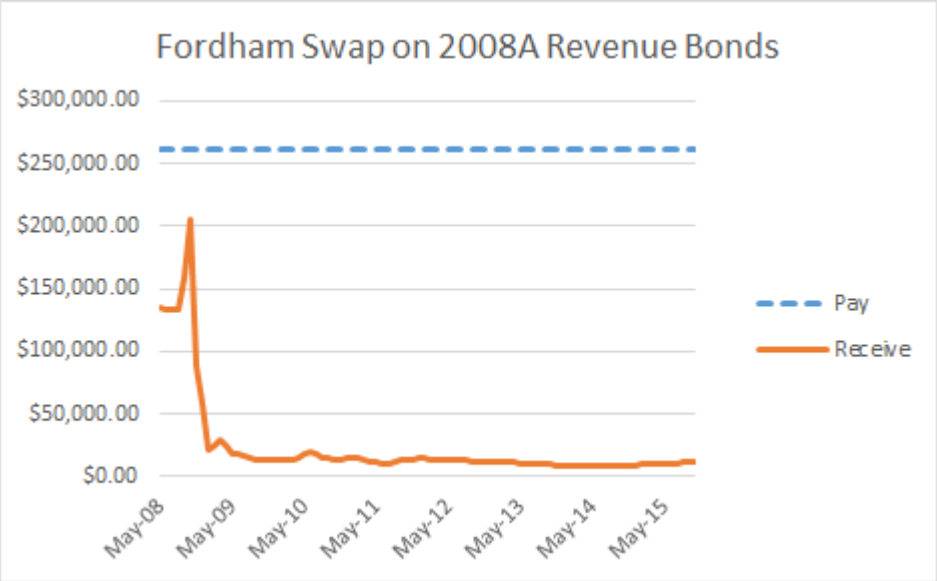


Figure [5] shows Fordham University's monthly payments on 2008 interest rate swaps, in dashes, versus rate received from Wall Street counterparty, in a solid line.

In 2005, Fordham University entered into a swap agreement with Merrill Lynch Capital Services, Inc., (now Bank of America), in connection with $96 million in underlying debt. The university refinanced the 2005 bonds in 2008. The swaps carried over to the new bond issuance, but with some modifications to the terms.[118]

From August 2005 to December 2015, the university paid swap costs totaling more than $22 million.[119] However, the real cost comes in terms of forgone opportunities that could have benefitted students, faculty, and research. This includes a variety of possibilities beyond potential scholarships, including improving adjunct faculty pay. In 2015, adjunct faculty protested the poor wages paid to them. According to The Fordham Ram, the university newspaper, adjuncts are paid around $3,800 per course—poverty wages, especially in New York City.[120] The money spent on swaps could have improved pay for adjuncts dramatically.

Georgetown University

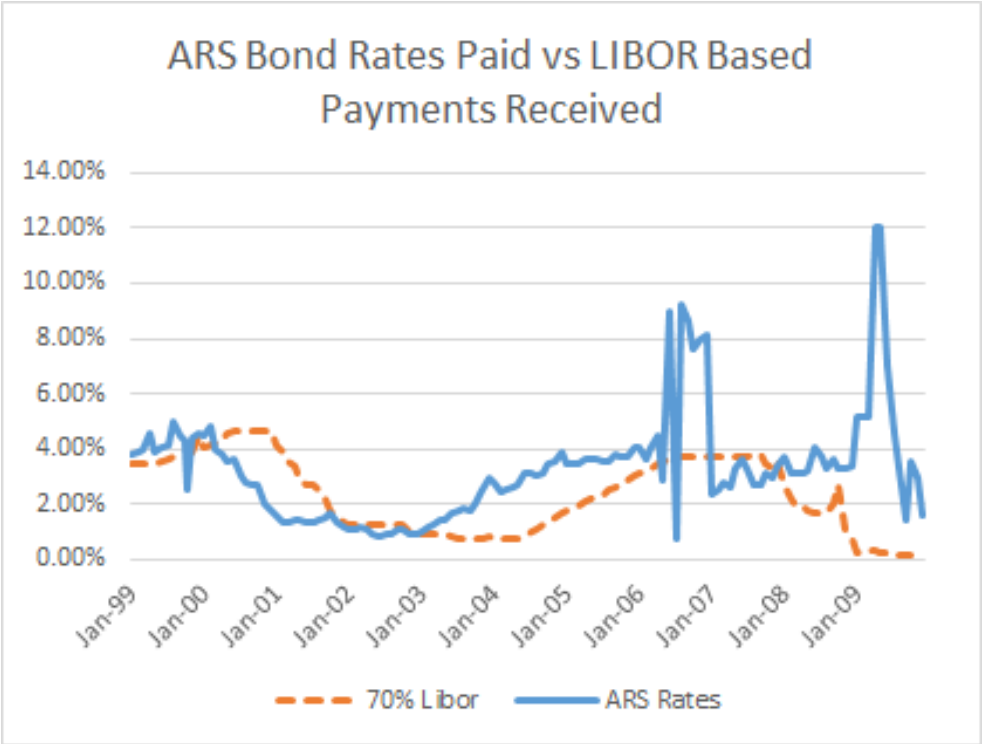
- Tuition and Fees 2004: $30,163[121]
- Tuition and Fees 2016: $50,964[122]
- A private Catholic and Jesuit research university in Washington, D.C.
- Total 2014-15 Enrollment: 3,759 undergraduate, 8,185 graduate[123]
- Swap Money Paid Out: $170 million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 3,335

Georgetown, the nation's oldest Catholic and Jesuit institution of higher education, has an endowment of about $1.4 billion.[124] Georgetown signed its first swap deal in 1998 on $215 million in bond debt. Looking at financial

[118] Electronic Municipal Market Access, "Fordham University Annual Financial Report for the year 2012," p. 19, accessed May 2, 2016, http://emma.msrb.org/ER631110-ER488560-.pdf.
[119] The complete cost of the swap was $22,182,224.05.
[120] Katie Meyer, "Adjuncts Protest for Better Wage in 2016," Fordham Ram, October 28, 2015, accessed May 23, 2016, https://fordhamram.com/2015/10/28/adjuncts-protest-for-better-wage-in-2016/.
[121] National Center for Educational Statistics IPEDS Data Center, "Georgetown University (UnitID: 131496) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[122] Georgetown University, "Undergraduate Cost of Attendance 2016-2017," accessed May 2, 2016, https://finaid.georgetown.edu/cost-of-attendance/undergraduate.
[123] Georgetown University, "Key Facts," accessed May 2, 2016, https://www.georgetown.edu/about/key-facts.
[124] Georgetown University, "Frequently Asked Questions," accessed May 2, 2016, https://investments.georgetown.edu/faqs.

reports since then, a pattern emerges: large bond issues every few years to rollover old debt and fund construction for the hospital, new dormitories, parking garages, and renovations. Georgetown had two particularly large bonds of note: the first in 1999 and the second in 2001, to the tune of $180 million[125] and $221 million respectively. These bonds, both of which were underwritten by Lehman Brothers, were issued as ARS, whose rates are determined by periodic auctions.

Georgetown paired these ARS with interest rate swaps, which started in 1998 and 2003. Lehman was also the swap counterparty,[126] which, given that it was also the underwriter on the deal, is a possible conflict of interest. When ARS auctions began failing in February 2008 and the ARS market froze, Georgetown's interest rates on its ARS began to spike. Two of Georgetown's ARS contracts had very high maximum rates, and by fall 2008, Georgetown was on the hook for 15 percent interest rates on the ARS.[127] Meanwhile, the variable rate it received from Lehman on the swaps—in theory meant to track and "cancel out" the variable rate it paid on the bonds—had fallen precipitously. Figure [6] below, which uses Series 1999A, illustrates the way the interest rates Georgetown paid on the ARS bonds diverged from the interest rates paid by the counterparty bank on the swap.



In September 2008, around the same time that Georgetown was seeing rates on its ARS spike to 15 percent, Lehman Brothers filed for bankruptcy. At the time, Georgetown had seven swap contracts and Lehman's failure triggered termination clauses in these contracts. The school paid Lehman $53 million in termination penalties in May 2009. The story does not end there, however. In 2012, Lehman Brothers' creditors subsequently disputed Georgetown University's valuation of the swaps and claimed that Georgetown underpaid when it wrote the check for the termination penalties. The university and Lehman Brothers' engaged in an Alternative Dispute Resolution process for three years before coming to a settlement in 2015. The 2015 annual financial report does not make the settlement amount clear.

[125] Electronic Municipal Market Access, "District of Columbia University Revenue Refunding Bonds, Series 1999A," accessed May 2, 2016, http://emma.msrb.org/MS156053-MS131361-MD254763.pdf.
[126] Georgetown University, "Georgetown University Continuing Disclosure Report FY 2009," p. 9, accessed May 2, 2016, https://georgetown.app.box.com/s/gvdel51lvu7tfpgftqun4t2nztgk03im.
[127] Bloomberg L.P. "Auction Rates for Georgetown University 1999 Series A Bonds," accessed May 2, 2016.

Not including the unknown additional settlement payment to Lehman, Georgetown has paid $53 million in penalties to exit toxic swaps, and has paid $117 million in net interest costs.[128] That's a total of $170 million in costs for toxic swaps. These figures do not include the additional fees and restructuring costs involved in converting the underlying ARS bonds to standard fixed or variable rate debt, or the costs incurred because of the ARS market collapse and subsequent interest rate spikes. As of June 2015, Georgetown would have to pay $41 million in termination penalties to get out of its remaining swaps.[129]

The far-reaching effects of financialization are still making life hard at Georgetown, which continues to have, as of 2014, nearly $950 million of debt. About $300 million of that debt is still on variable rate borrowing. The school still has three interest rate swaps with Goldman Sachs and Deutsche Banks to hedge that $300 million.[130] Moreover, the university expects more than $700 million of debt service payments to come due in the next eight years, making maximum annual debt service payments roughly 5.5 percent of annual revenues in 2014.[131] Moody's 2014 ratings report found Georgetown's "highly leveraged balance sheet and operations" set it apart from its peers.[132]

Goucher College

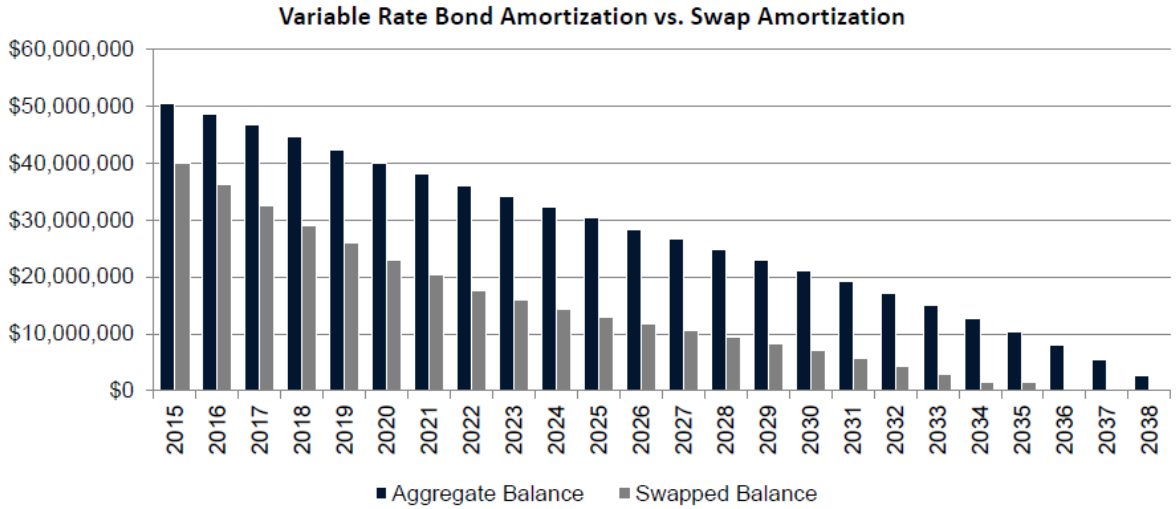
- Tuition and Fees 2004: $26,150[133]
- Tuition and Fees 2016: $45,214[134]
- A small liberal arts institution outside of Baltimore, Maryland
- Total 2015-16 Enrollment: 1,480 undergraduate, 900 graduate[135]
- Swap Money Paid Out: $12.4 million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 273

Goucher College is a small liberal arts institution outside of Baltimore with an undergraduate enrollment of 1,480 students. The school has entered into two swap agreements, the first in 1999 and the second in 2007. However, the 2007 swap is unusual.

The changes in the underlying borrowing connected to the 2007 swap did not follow any recognizable pattern, so we asked Goucher to explain. In an email, the Goucher financial office wrote: "The swaps were entered into in 1999 and 2007. Subsequent to 1999, the college issued additional debt in 2001 and again in 2007. The second swap was layered on top of the prior swap in order to fix gaps between the old amortization of pre-2001 variable rate debt and all variable rate debt through 2007. The notional amounts were combined to achieve a smoother exposure to variable rate debt across all issuances. A debt consultant depicted this exposure recently as such (Figure [7]):"

[128] This is a conservative estimate. Swap J's notional fell from $45,050,000 to $25,100,000 between July 2007 and July 2008. Because we did not have access to the detailed amortization schedule, we used the lower figure for our calculations.

[129] Georgetown University, "Georgetown Financial Statement 2015," p. 22, accessed May 2, 2016, https://georgetown.app.box.com/s/7150ifg88aym5ld6vjc82d8qo79400e3.
[130] Georgetown University, "Georgetown University Continuing Disclosure Report FY 2014," p.14 and 17, accessed May 2, 2016, https://georgetown.app.box.com/s/317cne97vq3m2c88u0e0su3aez4wqqna.
[131] Standard and Poor's, "Final S&P 2015 Report for Georgetown University," accessed May 2, 2016, https://georgetown.app.box.com/s/pjczl60pp41qy4gn1ckygtowpiubnfnb.
[132] Moody's investor services, "Georgetown March 2014 rating report 2014," accessed May 2, 2016, https://georgetown.app.box.com/s/n4ynn7lo55esxp7s18t4n97ib97affo1.
[133] National Center for Educational Statistics IPEDS Data Center, "Goucher College (UnitID: 162654) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[134] Goucher College, "Undergraduate Tuition and Fee Information, Goucher College 2016-2017," accessed May 2, 2016, http://www.goucher.edu/billing/undergraduate-tuition-and-fee-information.
[135] Goucher College, from an email from Goucher Admissions department, received April 4, 2016.



Goucher financial documents from 2007 to 2015 listed the notional amount of the swap as $25,000,000 in 2007, $38,965,000 in 2008, $36,810,000 in 2009, $33,805,000 in 2010, $30,675,000 in 2011, $27,420,000 in 2012, $24,020,000 in 2013, 20,465,000 in 2014 and 16,970,000 in 2015. Using these rates, we assumed a June 30th (the date of each annual financial report) change in the notional amounts and calculated the costs in the same method as other case studies.

Using these different amounts, the swaps have cost the school a little more than $12 million.[136]

For Goucher, that is a significant number. It represents just under 20 percent of student tuition in the 2014-2015 budget.[137] In 2014, Goucher ran a deficit of $2,040,000 and in 2015 a surplus of only $647,000.[138] The school cannot afford to be giving money away to Wall Street.

Harvard University

- Tuition and Fees 2004: $30,620[139]
- Tuition and Fees 2016: $47,074[140]
- A private research university in Cambridge, Massachusetts
- Total 2015-16 Enrollment: 6,700 undergraduate, 14,500 graduate[141]
- Swap Money Paid Out: $1.25 billion.
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 26,554

In 2009, Harvard University faced public embarrassment when various press outlets began reporting that the school had lost over a billion dollars due to a series of interest rate swaps that went bad.[142] By the time Harvard was able to exit all the agreements in 2013, the bad deals had cost the school $1.25 billion,[143] a number comparable to the total GDP of Greenland.[144]

[136] The total costs from interest rate swaps are calculated at $12,377,867.07.
[137] Revenue from 2014-2015 tuition and fees was $66,003,000. Goucher College, "Goucher College Audited Financial Report 2015," p. 20, accessed May 2, 2016, http://www.goucher.edu/Documents/Controller/Goucher-College-Audited-Financials-for-FY2015.pdf.
[138] Ibid, p. 5.
[139] National Center for Educational Statistics IPEDS Data Center, "Harvard University (UnitID: 166027) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[140] Harvard College, "Harvard College Cost of Attendance 2016-2017," accessed May 2, 2016, https://college.harvard.edu/financial-aid/how-aid-works/cost-attendance.
[141] Harvard College, "Harvard at a Glance," accessed May 2, 2016, http://www.harvard.edu/about-harvard/harvard-glance.
[142] Felix Salmon, "Those Harvard Swaps: Even More of a Fiasco then We Thought," Reuters, December 18, 2009, accessed May 2, 2016, http://blogs.reuters.com/felix-salmon/2009/12/18/those-harvard-swaps-even-more-of-a-fiasco-than-we-thought/.
[143] John Lauerman, and Michael McDonald, "Harvard Swap Toll Tops $1.25 Billion as Agreements Exited," Bloomberg, November 8, 2013, accessed May 25, 2016, http://www.bloomberg.com/news/articles/2013-11-08/harvard-swap-toll-tops-1-4-billion-ending-deals-in-2012-2013.
[144] Trading Economics, "Greenland Fact Sheet," accessed May 2, 2016, http://www.tradingeconomics.com/greenland/gdp.

Harvard entered into most of the deals in 2004. At that point, the school planned an expansion, for which it would issue $2.3 billion in bonds in 2008. It signed the swap deals to lock in interest rates four years in advance, a move that increased the risk it was taking on, because the longer the swap contract term, the more volatile the swap value. Harvard's swap contracts required it to post collateral or set aside cash when the values reached certain thresholds.[145]

When Harvard terminated swaps in fall of 2008, its counterparty banks were demanding cash collateral payments totaling almost a billion dollars. This is not an unusual feature of swap contracts, but in Harvard's case, the demand for huge collateral payments at a time when the school was strapped for cash was another manifestation of the risk the school took on when it signed the deals. Harvard opted instead to immediately borrow money to pay termination fees to the banks.

Michigan State University

- In-State Tuition and Fees 2004: $6,999
- In-State Tuition and Fees 2015: $13,612
- Out-of-State Tuition and Fees 2004: $17,844[146]
- Out-of-State Tuition and Fees 2015: $36,412[147]
- A public land-grant research university in East Lansing, Michigan
- Total 2015-16 Enrollment: 39,143 undergraduate, 11,400 graduate[148]
- Swap Money Paid Out: $130.2 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 9,564

Between 1998 and 2008, Michigan State University entered into 12 interest rate swap agreements with Lehman Brothers, JPMorgan Chase, Deutsche Bank, and UBS. When interest rates fell in late 2008, these deals began costing the university severely. Combined with termination fees to get out of these deals, as of the end of 2015, the university has spent just over $130 million on toxic swaps. This includes $112.3 million in swap net interest costs and $17.8 million in termination fees Michigan State University paid to exit swaps.[149] There are seven remaining active swaps, which the university cannot terminate unless it pays $54 million in penalties.[150]

[145] McDonald, "Harvard Swaps Are So Toxic Even Summers Won't Explain."
[146] National Center for Educational Statistics IPEDS Data Center, "Michigan State University (UnitID: 171100) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[147] Michigan State University, "Estimated Costs for 2015-16," accessed May 2, 2016, https://admissions.msu.edu/finances/tuition.asp.
[148] Michigan State University, "MSU facts," accessed May 2, 2016, https://msu.edu/about/thisismsu/facts.html.
[149] Electronic Municipal Market Access, "General Revenue Refunding Bonds, Michigan State University Series 2010C," p. 23, accessed May 2, 2016, http://emma.msrb.org/EP424002-EP333116-EP729414.pdf.
[150] Michigan State University, "Annual Financial Report 2014-2015," accessed May 2, 2016, http://www.ctlr.msu.edu/download/fa/financialstatements/FinRpt20142015.pdf.

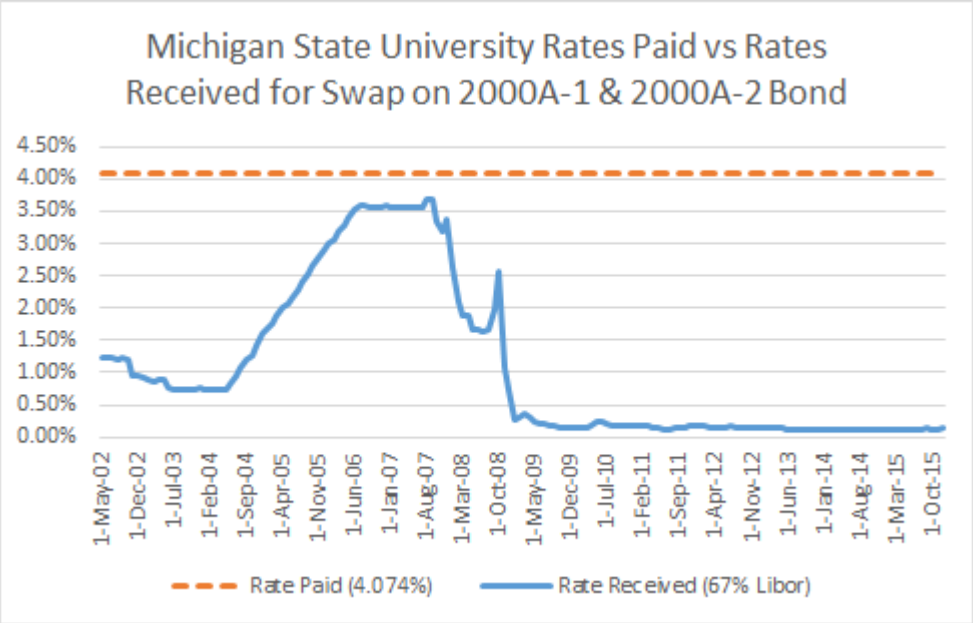


Figure [8] shows Michigan State University's monthly interest rates paid, in dashes, versus rate received from Wall Street counterparties, in a solid line. The difference between the two lines is the net cost of the swap to the university. Michigan State University made more than $40 million in net payments from 2002 to 2015 on this one swap.

Amidst these expenses, students at Michigan State have seen sharp rises in tuition costs. In the 2000-01 school year, tuition was around the national average, but between then and 2015-16, in-state tuition increased from $5,170 to $13,560 (excluding room and board), a 262 percent increase over just 15 years.[151] This is significantly more than the increase in the national average for in-state tuition at four-year public institutions over the same timeframe, which went from $4,845 to $9,410.[152]

Michigan State blames reduced state support and increasing costs to stay competitive for skyrocketing tuition.[153] The university's dependence on student fees increased over 350 percent in 15 years.[154] Michigan State has shifted the strain of decreasing funding by increasing tuition, causing a major strain on its students' budgets.

Peralta Community College District

- California Community College Per Credit Hour Fee 2004: $18
- California Community College Per Credit Hour Fee 2012: $46[155]
- A four-campus community college system serving communities in California's East Bay
- Total 2014-15 Enrollment: 20,001[156]
- Swap Money Paid Out: $5.6 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 4,568[157]

[151] Michigan State University, "2015-2016 Budgets," accessed May 2, 2016, https://opb.msu.edu/budget/documents/2015-16Budgets.pdf and Michigan State University, "2000-2001 Budgets," accessed May 2, 2016, https://opb.msu.edu/budget/documents/2000-01Budgets.pdf.
[152] CollegeBoard, "Tuition and Fees and Room and Board over Time, 1975-76 to 2015-16, Selected Years," accessed May 2, 2016, http://trends.collegeboard.org/college-pricing/figures-tables/tuition-and-fees-and-room-and-board-over-time-1975-76-2015-16-selected-years.
[153] Michigan State University, "MSU Budget Facts: Stewardship for a Sustainable Future," accessed May 2, 2016, http://www.budget.msu.edu/funding/MSU_Budget_Facts_3_22_2011.pdf.
[154] Michigan State University, "2015-2016 Budgets," accessed May 2, 2016, https://opb.msu.edu/budget/documents/2015-16Budgets.pdf and Michigan State University, "2000-2001 Budgets," accessed May 2, 2016, https://opb.msu.edu/budget/documents/2000-01Budgets.pdf.
[155] California Community Colleges, "Community College fact sheet," accessed May 2, 2016, http://californiacommunitycolleges.cccco.edu/PolicyInAction/KeyFacts.aspx.
[156] Peralta Community College, "Peralta Community College District 2015 Strategic Plan," p. 31, accessed May 2, 2016, http://web.peralta.edu/strategicplan/files/2009/02/Final-2015-Strategic-Plan-3-30-15.pdf.
[157] Based on 12 units per semester, 2 semesters per year. Peralta Community College, "Fee Information," accessed May 2, 2016, http://web.peralta.edu/admissions/fees/.

Peralta Community College District consists of four campuses: Laney College, Merritt College, Berkeley City College, and the College of Alameda. Peralta serves 25,000 students each semester and plays an important role in preparing students to transfer into the California State University and University of California systems.[158] Like other community colleges in California, Peralta receives the majority of its funding from the state.

In 2005, Peralta issued six series of convertible auction rate securities. Each of the six series began with a fixed interest rate, and then one by one, at different dates, converts to a variable interest rate. As each one of the bonds reaches maturity and is retired, the next bond in the series converts to a variable rate.

As part of this deal, Peralta entered into six interest rate swaps with Morgan Stanley Capital Services. Each swap is associated with a corresponding bond series and takes effect on the date that the bond converts to a variable interest rate.

The fixed interest rates Peralta is locked into paying on the swaps range from 4.90 percent to 5.279 percent. The last of the swaps starts in 2039 and ends in 2049. This means that when it signed the deal, Peralta committed to interest rates on swaps that wouldn't kick in for another 30 years. This was a huge gamble, and raises serious questions about how well Peralta understood the deals it was signing.[159]

Morgan Stanley has reaped millions in profits from Peralta. As of December 2015, the swaps activated thus far are costing Peralta just under $2 million per year and have cost $5.6 million in net swap payments since the first swap started in 2010.[160] As of the 2015 Annual Financial Statement, Peralta would have to pay Morgan Stanley nearly $22 million in termination penalties if it wanted to exit the deals,[161] a prohibitive amount that could lock Peralta into these toxic swap deals for another four decades.

The Great Recession took a huge toll on California's public higher education system. The drastic decrease in state revenues caused a funding crisis and resulted in huge budgets cuts and big hikes in fees for students. In 2011, at the height of its unprecedented funding crisis and facing million in cuts, Peralta community members, teachers, staffers, and custodians sent a letter to Stratford Shields, managing director and head of public finance at Morgan Stanley, strongly encouraging Morgan Stanley to negotiate with Peralta's Board of Trustees to end the swap contracts, eliminate the termination fee with no damage to Peralta's credit rating, and put public education above profits. However, five years later, the costly toxic swaps are still on Peralta's books, and Morgan Stanley is still collecting millions each year.[162]

[158] Peralta Community College, "Peralta Community College District Annual Financial Report for the year 2015," p. 4, accessed May 2, 2016, http://web.peralta.edu/business/files/2011/06/Peralta-CCD-Final-20151.pdf.
[159] Peralta Community College, "Peralta Community College District Annual Financial Report for the year 2015," p. 4, accessed May 2, 2016, http://web.peralta.edu/business/files/2011/06/Peralta-CCD-Final-20151.pdf.
[160] Net cost to date as of December 2015 is $5,655,912. The current annual cost, based on notional and interest rates as of December 2015, is $1.9 million/year based on multiplying a monthly cost of 158,000 per month by 12.
[161] Exact amount is $21,834,707. Peralta Community College, "Peralta Community College District Annual Financial Report for the year 2015," p. 49, accessed May 2, 2016, http://web.peralta.edu/business/files/2011/06/Peralta-CCD-Final-20151.pdf.
[162] Peralta Community College, "Peralta Community College District Annual Financial Report for the year 2015," p. 49, accessed May 2, 2016, http://web.peralta.edu/business/files/2011/06/Peralta-CCD-Final-20151.pdf. The swaps are referred to as the "Morgan Stanley Interest Rate SWAP."

Peralta Bond Conversion Schedule

Bond Series	Principal Amount	Conversion Date	Maturity Date
2005 B-1	33,950,000	August 5, 2010	August 5, 2015
2005 B-2	38,450,000	August 5, 2015	August 5, 2020
2005 B-3	43,175,000	August 5, 2020	August 5, 2025
2005 B-4	57,525,000	August 5, 2025	August 5, 2031
2005 B-5	86,650,000	August 5, 2031	August 5, 2039
2005 B-6	134,475,000	August 5, 2039	August 5, 2049

Case Study: California Community College Capital Appreciation Bonds (CABs)

A capital appreciation bond (CAB) is a long-term bond with compounding interest on which the borrower is unable to make any principal or interest payments for the first several years, and, in some cases, until the final maturity of the bond. In this way, it is similar to a negative amortization mortgage, in which the outstanding principal actually grows over time because the unpaid interest gets tacked onto the amount owed and compounds. Because of this structure, borrowers often end up paying extraordinary amounts of interest over the life of the bonds. An infamous example is that of Poway Unified School District in San Diego County, which will have a final bill of more than $1 billion for a loan of $105 million.[163]

Public colleges—particularly community college districts hit by years of funding decreases—have been particularly vulnerable to these funding schemes.

In 2013, California Governor Jerry Brown signed into law restrictions on the use of capital appreciation bonds.[164] This happened too late to save school districts and community colleges across the state from getting stuck in what State Treasurer Bill Lockyer called the "equivalent of a payday loan,"[165] because of the huge balloon payments municipal borrowers (and by extension, taxpayers) would find themselves facing many years down the road. According to the California State Treasurer, 490 general obligation CABs were issued between 2007 and November of 2012. Community college districts issued nearly 13 percent of those.[166]

Though various types of bond issuers throughout the country got into bad CAB deals, California school districts were especially vulnerable because of funding problems caused by California's property tax system and

[163] James Nash, "Bonds for $100 Million to Cost School Over $1 Billion," Bloomberg, August 7, 2012, accessed May 25, 2016, http://www.bloomberg.com/news/articles/2012-08-06/payments-on-105-million-school-bond-will-top-1-billion.
[164] Dan Weikel, "Gov. Brown signs law limiting risky capital appreciation school bonds," Los Angeles Times, October 2, 2013, http://articles.latimes.com/2013/oct/02/local/la-me-ln-school-bonds-20131002.
[165] Richard Gonzales, "School District Owes $1 Billion On $100 Million Loan," National Public Radio, December 7, 2012, updated March 21, 2014, accessed May 25, 2016, http://www.npr.org/2012/12/07/166745290/school-district-owes-1-billion-on-100-million-loan.
[166] Official California Legislative Information, "California Assembly Bill 182 Bill Analyses," March 12, 2013, accessed May 25, 2016, http://www.leginfo.ca.gov/pub/13-14/bill/asm/ab_0151-0200/ab_182_cfa_20130318_154906_asm_comm.html.

exacerbated by falling property values and declining tax revenues during the Great Recession.[167] Many schools faced spending limits that made ordinary borrowing difficult or even impossible, while also facing huge needs for infrastructure projects. Banks peddling CABs offered a "solution" that just pushed the funding problem into the future, and allowed public officials to avoid having to figure out a way to generate adequate revenue.

The Los Angeles Times created a database of California school CABs, which we used to examine some of the community college level deals.[168] We found community college CABs with maturity lengths of up to 40 years and principal to payout ratios of up to 1:13. (A typical vanilla 30-year fixed rate bond might have an original principal to payout ratio of 1:2.) Community college districts in the Times' database had total principal issuance of more than $1.34 billion, with a total maturity of nearly $5.2 billion. When we filtered for CABs with more than a 1:4 ratio (the limit imposed by the 2013 law) we found principal amounts totaling about $343 million and a total debt service of about $2.3 billion—an average debt ratio of nearly 1:7.

The table [Figure 10] below details some of the most egregious deals. In some of the worst examples, a loan for less than $16 million becomes a debt of more than $177 million; a loan of less than $21 million becomes a debt of more than $237 million; and a loan of less than $5 million becomes a debt of nearly $60 million. Those are taxpayer dollars, shifted from community college budgets to banks and to bond investor profits.

Figure 10

College District	Original Principal	Payout	Principal-to-Payout Ratio	Time to Maturity
Mendocino-Lake Community College District	$15.7 Million	$177.2 Million	1:11	40 years
Victor Valley Community College District	$20.8 Million	$237 Million	1:11	40 years
Yuba Community College District	$4.63 Million	$59 Million	1:13	39 years

Stanford University

- Tuition and Fees 2004: $29,847[169]
- Tuition and Fees 2015: $45,729[170]
- A elite private research university in Stanford, California
- Total 2015-16 Enrollment: 6,999 undergraduate, 9,771 graduate[171]
- Swap Money Paid Out: $63 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 1,377

Stanford has the fifth largest endowment of any university in the country.[172] Between 2003 and 2015, Stanford entered into a series of interest rate swaps on variable rate bonds that have cost over $50 million according to its

[167] Nash, "Bonds for $100 Million to Cost School Over $1 Billion"
[168] "Capital Appreciation Bonds Spreadsheet," Los Angeles Times Data Desk, accessed May 2, 2016, http://spreadsheets.latimes.com/capital-appreciation-bonds/.
[169] National Center for Educational Statistics IPEDS Data Center, "Stanford University (UnitID: 243744) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[170] Stanford University, "Registrar's office, 2015-2016 Tuition Schedule," accessed May 2, 2016, https://registrar.stanford.edu/students/tuition-and-fees.
[171] Stanford University, "Common Data Set 2015-2016," accessed May 2, 2016, http://ucomm.stanford.edu/cds/2015#enrollment.

own financial statements.[173] It was hit with an additional $13 million penalty in December 2012 when it ended a portion of those swap deals early in attempt to lower long-term costs.[174] Finally, one of the university's swaps was on $130 million in ARS that failed when the ARS market froze, forcing the school to issue new bonds to attach to the existing swap.[175] Stanford faces $35.6 million in penalties to exit these swaps.[176] (Stanford Hospitals also have swaps, but we didn't use them in our calculations. Termination penalties to exit swaps were estimated at more than $215 million in fiscal year 2015, which indicates that an examination of these swaps would likely find heavy costs.)

Sweet Briar College

- Tuition and Fees 2004: $20,880[177]
- Tuition and Fees 2014: $36,460[178]
- A private liberal arts university for women in Amherst, Virginia
- Total 2015-16 Enrollment: 532 before the school announced they planned to close, current enrollment estimated 250[179]
- Swap Money Paid Out: $3.24 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 89

Sweet Briar College had a rough 2015. In January, the college's then-president announced that financial problems would force the college to close its doors forever. Over the next few months, the alumni community—refusing to accept the judgment of the president and board—raised $30 million and sued the state of Virginia to keep the school open. The entire administration resigned, and the new president, Phil Stone, managed to pick up the pieces and open the doors in time for the class of 2019 to arrive. The settlement to keep the school open also contains provisions for freeing up some of the school's endowment, which had been legally restricted and unavailable for spending on regular operations.[180]

The rebirth of Sweet Briar College brings with it insight into how bad Wall Street deals hurt the school's bottom line for nearly a decade. The school purchased its first interest rate swap in 2001,[181] and then issued two more around a June 2008 bond.[182] It exited all three swaps when it took out a new bond in 2011,[183] which it used to pay off large portions of outstanding debt. In total, the net swap payments and the termination fees paid to exit the three swaps cost the school more than $3.2 million.[184]

[172] National Association of College and University Business Officers, "U.S. and Canadian Institutions Listed by Fiscal Year 2014," accessed May 2, 2016, http://www.nacubo.org/Research/NACUBO-Commonfund_Study_of_Endowments.html.
[173] Stanford lacked information about the rate being paid to the university by financial institutions, which prevented us from performing our standard calculations. Our estimate is based instead on Stanford's self-reported "net payments on swap/exchange agreements" in annual financial reports from 2003 to 2015.
[174] Stanford University, "2013 Annual Financial Report," p. 39, accessed May 2, 2016, http://bondholder-information.stanford.edu/pdf/SU_AnnualFinancialReport_2013.pdf.
[175] Stanford University, "2008 Annual Financial Report," p. 27 and 45, accessed May 2, 2016, http://bondholder-information.stanford.edu/pdf/AnnualReport_2008.pdf.
[176] Stanford University, "2015 Annual Financial Report," p. 42, accessed May 2, 2016, http://bondholder-information.stanford.edu/pdf/SU_AnnualFinancialReport_2015.pdf.
[177] National Center for Educational Statistics IPEDS Data Center, "Sweet Briar College (UnitID: 233718) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[178] Sweet Briar College, "Sweet Briar College Catalogue, 2014-2015 Fees," accessed May 2, 2016, http://oldweb.sbc.edu/catalog/college-fees-2014-15#payment.
[179] Dan Gottlieb, "Enrollment and how Moody's got it wrong: the Sweet Briar Story Part 1," Unsolicited Guru Blog, April 19, 2015, accessed May 2, 2016, http://www.unsolicited.guru/sweet-briar/enrollment-and-how-moodys-got-it-wrong-the-sweet-briar-story-part-1/.
[180] Ibid.
[181] GuideStar.org, "Sweet Briar Audited Financial Report 2010 - 2009," p. 20, accessed May 2, 2016, http://www.guidestar.org/ViewEdoc.aspx?eDocId=2187013&approved=True.
[182] Electronic Municipal Market Access, "Sweet Briar College Variable Rate Educational Facilities Revenue Bond," accessed May 2, 2016, http://emma.msrb.org/MS271793-MS268438-MD531672.pdf.
[183] GuideStar.org, "Sweet Briar Audited Financial Report 2012 – 2011," p. 26, accessed May 2, 2016, http://www.guidestar.org/ViewEdoc.aspx?eDocId=2187017&approved=True.
[184] The precise figure is $3,245,573.21.

Under the terms of their 2008 bond, Sweet Briar was required to carry a letter of credit, which is effectively similar to getting a cosigner on a loan. When the letter of credit came up for renewal, the school's credit rating had fallen,[185] and Wells Fargo refused to renew it.[186] This forced the college to refinance the debt into a new fixed-rate bond, and it also triggered termination clauses in the related swaps, forcing the college to pay termination penalties.

In short, the banks loaned the school enough money that it became a risky investment to loan them more, and then cut off the spigot of borrowing. The school then issued a 2011 bond, on less favorable terms then they'd secured previously.[187]

The next downgrade, which happened right before the school announced they planned to close in 2015, was the final straw. Because the default provisions of the 2011 bond (underwritten by SunTrust) required that they maintain a credit rating of BBB, the school was worried that they'd be forced even further down the spiral of debt if they refinanced again. Instead of working to increase the money they had on hand to offset that downgrade, Sweet Briar's administration decided to break the cycle by officially closing the school.

It was only through a sustained effort by a contingent of the alumni community that Sweet Briar was able to reopen. The school has a significant endowment, currently valued at about $70 million,[188] but has been forced to spend that endowment down. The combination of mismanagement and bad debt meant that the school was running in the red for more than five years. In 2014, the financial year that appears to have been the final straw for Sweet Briar, total operating revenues were $32.1 million and total operating expenditures were $35.4 million, which means that the deficit the school was running was actually less than the costs the school had suffered on its swaps deals.[189]

University of California

- In-State Tuition and Fees for Berkeley, the university flagship, 2004: $5,956
- In-State Tuition and Fees for Berkeley, the university flagship, 2015: $13,400
- Out-of-State Tuition and Fees 2004: $22,912[190]
- Out-of-State Tuition and Fees 2015: $38,108[191]
- A public research university located in Berkeley, California
- Total 2015-16 Enrollment for Berkeley, the university flagship: 27,496 undergraduate, 10,708 graduate[192]
- Swap Money Paid Out for the UC system: $57 Million as of 2011
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 4,253

In 2011, a team of researchers at the University of California at Berkeley, lead by Charlie Eaton, published an examination of the University of California's use of interest rate swaps connected to bonds issued for three of the systems medical centers. They found that swaps had cost the University of California system nearly $57 million since 2003 and would require $200 million to exit.[193] We did not update the Berkeley team's cost figures, so there

[185] Electronic Municipal Market Access, "Letter of Credit, Official Statement of the 2008 Series Variable Rate Education Facilities Revenue Bond," p. 6d, accessed May 2, 2016, http://emma.msrb.org/MS271793-MS268438-MD531672.pdf.
[186] Sweet Briar College, "Sweet Briar College Finance and Administration Report to Faculty," p. 73, accessed May 2, 2016, https://www.dropbox.com/s/qu75h104rkg1pka/SBCFacMeetingFinancesTot.pdf.
[187] Ibid.
[188] Jessie Pounds, "Sweet Briar Board OK's Austerity Budget," The Roanoke Times, November 4, 2015, accessed May 25, 2016, http://www.roanoke.com/news/virginia/sweet-briar-board-ok-s---budget-plan-would/article_9ed5ac78-8d79-5a43-8dac-2f3caa443e50.html.
[189] Electronic Municipal Market Access, "Sweet Briar Audited Financial Report 2014-13," p. 6, accessed May 2, 2016, http://emma.msrb.org/ER814651-ER634061-ER1035662.pdf.
[190] National Center for Educational Statistics IPEDS Data Center, "University of California-Berkeley (UnitID: 110635) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[191] University of California, "Tuition and Cost of Attendance 2015-2016," accessed May 2, 2016, http://admission.universityofcalifornia.edu/paying-for-uc/tuition-and-cost/.
[192] University of California, "UC Berkeley Fall Enrollment Data," accessed April 19, 2016, http://opa.berkeley.edu/uc-berkeley-fall-enrollment-data.
[193] Eaton, "Swapping our Future."

are three years of costs missing from the $57 million figure. (We also have not looked at swaps held by individual University of California campuses.) As of fiscal year 2015, the cost to exit these deals is 91.1 million.[194]

Eaton and his team identified several possible conflicts of interest with University of California leaders. For example, Regent and former Regents Finance Committee Chair Monica Lozano at the time had received approximately $1.5 million in compensation as a member of the Bank of America Board of Directors. Bank of America stood to pocket as much as $28 million from one of the University of California swaps.[195]

University of Illinois

- In-State Tuition and Fees 2004: $7,944
- In-State Tuition and Fees 2015: $15,636
- Out-of-State Tuition and Fees 2004: $20,864[196]
- Out-of-State Tuition and Fees 2015: $30,786[197]
- A Public University with campuses in Chicago, Urbana-Champaign, and Springfield
- Total 2015-16 Enrollment: 53,326 undergraduate, 20,824 graduate[198]
- Swap Money Paid Out: 61 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 3,901

Higher education has been hit particularly hard in Illinois as a result of the budget stalemate. Governor Bruce Rauner refuses to sign a budget unless the General Assembly passes a series of anti-union measures, so the state has been forced to cut off funding for public universities and community colleges.[199] In February 2016, the governor vetoed a bill that would have funded financial aid grants for low-income students across the state.[200] Colleges and universities across Illinois are really feeling the pinch.

During this time, the University of Illinois is still being forced to spend $6 million each year on toxic swaps. The university has three swaps with Loop Financial, Morgan Stanley, and JPMorgan Chase. It has paid these banks $61 million in net swap payments thus far, and it cannot exit these deals unless it pays another $24 million in termination penalties.

At a time when low-income students across Illinois have to make unconscionable choices about whether they can afford to stay in school, the University of Illinois is being forced to spend millions on toxic financial deals. This money could be much better spent providing 3,900 scholarships to students who have lost their financial aid grants from the state.

Moreover, this situation is exacerbated by the fact that the state has swaps of its own. The State of Illinois and various state agencies, including the University of Illinois, pay banks $68 million a year on toxic swaps.[201] The state has spent $618 million in net swap payments thus far, which has drained money out of the budget. The state's swap payments are actually illegal absent a budget, since the state cannot make payments for which the General

[194] University of California, "University of California Annual Financial Report for 2015," p. 70, accessed April 19, 2016, http://finreports.universityofcalifornia.edu/index.php?file=14-15/pdf/fullreport-1415.pdf.
[195] Eaton, "Swapping our Future."
[196] National Center for Educational Statistics IPEDS Data Center, "University of Illinois at Urbana-Champaign (UnitID: 145637) Price Trends, accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[197] University of Illinois, "Academic Year 2015-2016 Undergrad Base Tuition Rates," accessed May 2, 2016, https://registrar.illinois.edu/ug-tuition-rates-1516.
[198] University of Illinois, "About the University of Illinois System," accessed June 2, 2016, https://www.uillinois.edu/about and University of Illinois at Urbana-Champaign "Student enrollment" accessed June 2, 2016, https://oiir.illinois.edu/about/demographics
[199] Safo Nova, "Illinois Cuts off Funding for its Public Universities," Marketplace, March 18, 2016, accessed May 25, 2016, http://www.marketplace.org/2016/03/14/education/illinois-cuts-funding-its-public-universities.
[200] Tom Schuba, "Rauner Vetoes MAP Grant Bill," NBC Chicago, February 19, 2016, accessed May 25, 2016, http://www.nbcchicago.com/blogs/ward-room/Rauner-Vetoes-Map-Grant-Bill-369469972.html
[201] Saqib Bhatti and Carrie Sloan, "Turned Around: How The Swaps That Were Supposed to Save Illinois Millions Became Toxic," January 2016, accessed May 26, 2016, http://rooseveltinstitute.org/wp-content/uploads/2016/01/Turned-Around-Jan-2016.pdf.

Assembly has not specifically appropriated funds. However, even though the state is using the lack of a budget as an excuse to cut higher education, it is choosing to pay the banks for toxic swaps.[202]

The 2003 Illinois law that made many of the state's swap deals possible was written by a bond attorney and passed by a legislature that didn't understand what they were approving. The bill's sponsor, Illinois Senator John Cullerton, told legislators that he had a limited grasp of the bill and said he hoped nobody had any questions. The attorney who wrote the first draft of the bill said that the goal was to, as the Chicago Tribune put it, "expand borrowing opportunities for governments and potentially generate business for his firm." It's worth noting that these complicated deals are generally more lucrative for banks and law firms that traditional borrowing.[203] This is a good example of the financial industry writing legislation that benefits itself at the expense of governments and other bond issuers.

University of Michigan

- In-State Tuition and Fees 2004: $6,999
- In-State Tuition and Fees 2015: $13,856
- Out-of-State Tuition and Fees 2004: $17,844[204]
- Out-of-State Tuition and Fees 2015: $43,476[205]
- A public land-grant research university in Ann Arbor, Michigan
- Total 2015-16 Enrollment: 28,312 undergraduate, 15,339 graduate
- Swap Money Paid Out: $85.45 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 6,166

The University of Michigan's Office of Public Affairs cites a decrease in public funding as the primary driver of the dramatic increase in cost over the last decade.[206] State funding has declined by 40 percent on a per-student basis over the past decade if adjusted for inflation.[207]

While this is a part of the story, the University of Michigan reacted to this decrease like many other public universities—by borrowing, and then getting involved in risky deals that it likely thought would help it save money. From 1998 to 2008, banks sold the university five interest rate swaps on hospital, medical service, and general revenue bonds. These swaps have cost the school at least $85 million combined in payments to Morgan Stanley and Bank of New York Mellon.

In 2014, the university began charging students a mandatory $65 per semester to pay for renovations on the school's student union buildings and recreational sports facilities.[208] Over the same year, the university paid the banks $7.4 million in net interest on the swaps, which is much more than the revenue generated from the new fee.

In two swaps, subsidiaries of Morgan Stanley served as both the bond underwriter and swap counterparty, which raises a red flag about a possible conflict of interest. Underwriters are de facto advisors that likely helped the school decide to issue variable-rate bonds with a swap rather than a traditional fixed-rate bond. If they advised the school to use a deal structure that they then profit on as a counterparty, it constitutes a conflict of interest.

[202] Ibid.
[203] Gillers, "Lawmakers Opened Door to Risky CPS Bond Deals."
[204] National Center for Educational Statistics IPEDS Data Center, "University of Michigan-Ann Arbor (UnitID: 170976) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[205] University of Michigan, "Office of the Registrar, Tuition and Registration Fees Effective Fall 2015," accessed May 2, 2016, http://ro.umich.edu/tuition/tuition-fees.php#fullterm.
[206] University of Michigan, "Additional Q&A About Tuition," accessed May 2, 2016, https://publicaffairs.vpcomm.umich.edu/key-issues/tuition/additional-qa-about-tuition/.
[207] Ibid.
[208] University of Michigan, "USFIF: A new Mandatory Fee," accessed May 2, 2016, http://www.finance.umich.edu/node/32972.

One agreement even protected Morgan Stanley from risk by allowing the company to terminate the deal if variable rates hit 7 percent for 180 days, while offering no similar protection for the university when rates actually sank near zero.[209] The swap was effectively a gamble that the bank couldn't lose.

Figure [11] illustrates the gap between net swap payments made by the University of Michigan to banks and those the school received from banks.

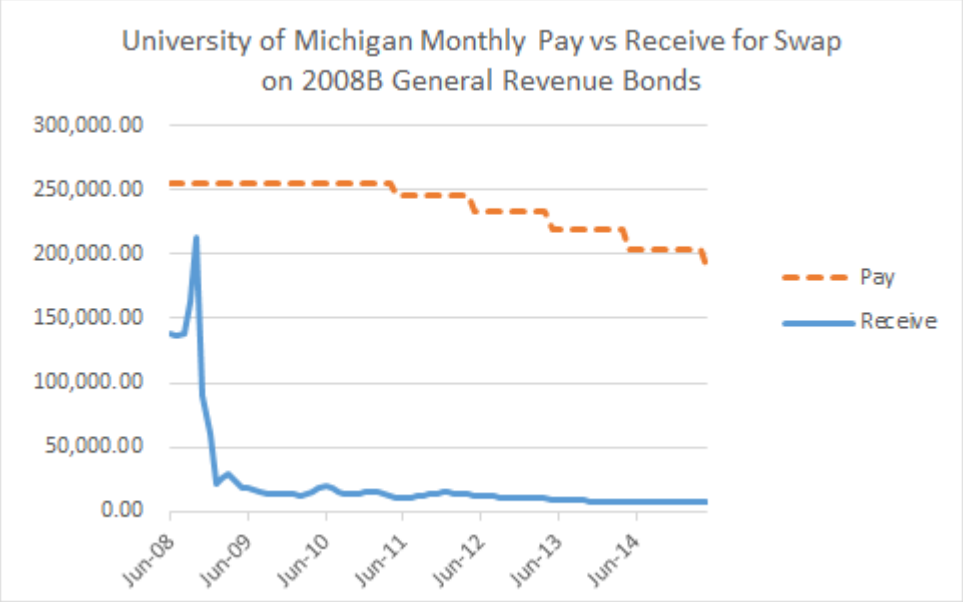


Figure [11] shows University of Michigan's monthly payments on a 2008 interest rate swap, in dashes, versus rate received from Wall Street counterparties, in a solid line. The difference between the two lines is the net cost of the swap to the university.

University of Minnesota

- In-State Tuition and Fees 2004: $8,230
- In-State Tuition and Fees 2015: $13,326
- Out-of-State Tuition and Fees 2004: $19,860[210]
- Out-of-State Tuition and Fees 2015: $21,746[211]
- Public research university located in Minneapolis and St. Paul, Minnesota
- Total 2015-16 Enrollment: 43,457 undergraduate, 13,311 graduate[212]
- Swap Money Paid Out: $50 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 3,752[213]

Like many public institutions, the University of Minnesota has seen its state funding shrink drastically in recent years. In 2014, state funding to the University of Minnesota was 18 percent less than in 2006 in constant dollars (adjusted for inflation)[214] even though enrollment climbed 7 percent during that time.[215]

[209] University of Michigan, "Annual Financial Report 2010, University of Michigan," p. 73, accessed May 2, 2016, http://www.finance.umich.edu/reports/2010/pdf/NCFSFY10.pdf.
[210] National Center for Educational Statistics IPEDS Data Center, "University of Minnesota-Twin Cities (UnitID: 174066) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[211] We calculated fees using those fees that apply to all or most undergraduate students. University of Minnesota, "One Stop Student Services, Tuition Rates 2015-2016," accessed May 2, 2016, http://ro.umich.edu/tuition/tuition-fees.php#fullterm.
[212] University of Minnesota, "All Enrollment Data for Fall 2015," accessed May 2, 2016, http://www.oir.umn.edu/student/enrollment/term/1159/current/show_all.
[213] College Data, "University of Minnesota," accessed May 2, 2016, http://www.collegedata.com/cs/data/college/college_pg03_tmpl.jhtml?schoolId=991.
[214] University of Minnesota, "2006 Annual Financial Report," accessed May 2, 2016, http://www.finsys.umn.edu/controller/um_annualrpt2006.pdf, and University of Minnesota, "2014 Annual Financial Report," accessed May 2, 2016, http://www.finsys.umn.edu/controller/um_annualrpt2014.pdf.

To make up for this loss of funding, the University of Minnesota increased its tuition and fees. Students have had to take on more debt to pay the increased tuition. Sixty-two percent of students at the University of Minnesota's Twin Cities campus graduating with bachelor degrees have student loan debt,[216] a 20 percent increase from 2006.[217] The average debt load held by those students grew 40 percent from $24,185 in 2006[218] to $34,015 in 2014.[219] In constant dollars, that's a more than 16 percent increase.

The University of Minnesota has also had to take on additional debt. Its long-term debt has more than doubled in current dollars since 2006 from $633 million[220] to almost $1.3 billion.[221] Adjusted for inflation, that's a 70 percent increase. The annual interest payments on this debt have increased from $28.1 million in 2006[222] to $45.6 million a year in 2014,[223] a 34 percent increase, adjusted for inflation.

The University of Minnesota has instituted a "capital enhancement fee" of $75 per student, per term on the Twin Cities campus—$150 per year for Fall and Spring Semester students—to pay for "long-term capital financing for the renewal of facilities or construction of new facilities that contribute to or enhance student life."[224] The school also charges students $12.50 per term for a stadium fee, which supports the construction costs and debt service of the on-campus football stadium.[225] Meanwhile, toxic swaps are costing the University of Minnesota $3.5 million a year in net payments to JPMorgan Chase, and have cost the school a total of $50 million just since 2009.

The University of Minnesota has had two interest rate swaps that matured in 2013 and for which the school paid a fixed rate of almost 5 percent,[226] while receiving a variable rate that had been below 1 percent since 2009, resulting in the school paying a total of $12.5 million more in interest than they received during that time. In 2011, the University of Minnesota paid more than $17.2 million in penalties to get out of three toxic swaps.[227] It has one swap remaining, on which it pays a fixed rate of nearly 5 percent while JPMorgan Chase pays a variable rate that has been below 1 percent since 2009. The University of Minnesota would have to pay nearly $7 million in fees to exit this swap.[228]

The University of Minnesota also had $71 million in 2003 ARS, paired with swaps, from 2003 until they converted the bonds in October 2008. The interest rates on these ARS spiked to 6.15 percent in March of 2008, after the auction market crashed.[229] Remember that in theory, the variable rate paid by the bank swap counterparty would track the variable rate on the bond. But with the University of Minnesota paying relatively high fixed rates on the related swaps and these higher rates on the ARS, while receiving payments based on an interest rate hitting record lows, the structure of the swap deal completely failed.

[215] From 87,799 in 2006 to 93,947 in 2014. University of Minnesota, "Office of Institutional research. Student Financial Support," accessed May 2, 2016, http://www.oir.umn.edu/student/financial_support/report.
[216] Ibid.
[217] Ibid.
[218] Ibid.
[219] Ibid.
[220] University of Minnesota, "University of Minnesota 2007 Annual Financial Report," p. 54, accessed May 2, 2016, http://www.finsys.umn.edu/controller/um_annualrpt2007.pdf.
[221] University of Minnesota, "University of Minnesota 2014 Annual Financial Report," p. 46, accessed May 2, 2016, http://www.finsys.umn.edu/controller/um_annualrpt2014.pdf.
[222] University of Minnesota, "University of Minnesota 2007 Annual Financial Report," p. 30.
[223] University of Minnesota, "University of Minnesota 2014 Annual Financial Report," p. 25.
[224] University of Minnesota, "One Stop Student Services, Tuition Rates 2015-2016," accessed May 2, 2016, http://ro.umich.edu/tuition/tuition-fees.php#fullterm.
[225] Ibid.
[226] University of Minnesota, "University of Minnesota 2014 Annual Financial Report," p. 49, accessed May 2, 2016, http://www.finsys.umn.edu/controller/um_annualrpt2014.pdf.
[227] University of Minnesota, "University of Minnesota 2011 Annual Financial Report," p. 13, accessed May 2, 2016, http://finsys.umn.edu/annual-reports/um_annualrpt2011.pdf.
[228] University of Minnesota, "University of Minnesota 2015 Annual Financial Report," p. 48, accessed May 2, 2016, http://finsys.umn.edu/annual-reports/um_annualrpt2015.pdf.
[229] Bloomberg L.P., "Auction Rates for University of Minnesota Series 2003A General Obligation Bonds," accessed May 2, 2016.

Wake Forest

- In-State/Out-of-State Tuition and Fees 2004: $8,230[230]
- In-State/Out-of-State Tuition and Fees 2016: $48,746[231]
- A mid-sized private school located in Winston-Salem, North Carolina.
- Total 2015-16 Enrollment: undergraduate 4,846, graduate 7,669[232]
- Swap Money Paid Out: $92.2 Million
- Full-time undergraduate students (tuition and fees) swap payouts could pay for: 1,891

Wake Forest University, like many of the schools profiled here, has been getting radically more expensive over the past decade. Tuition supports a large portion of the total operating budget of the school, especially the Reynolds campus, which is where the undergraduate population lives and studies. Student fees and tuition were the equivalent of 80 percent of the total Reynolds operating budget in 2015, and, after financial aid is paid out, more than half of the operating budget is still comprised of tuition.[233] This is in contrast to 65 percent of the budget in 2007-08, and 49 percent of the budget after financial aid.[234] Thirty-two percent of all undergraduate students at Wake Forest use federal student loans to help pay for their education, averaging $7,294 per year.[235]

According to Wake Forest's 2009 annual financial report, the results of the 2008 crash were disastrous for the university. In financial year 2009, the school's net assets decreased by $180 million (after a $3 million decrease in financial year 2008). Wake Forest cites investment declines and interest rate swap costs among the primary reasons for the asset loss.[236]

Wake Forest entered into five separate swap agreements. The school's first swap, with Merrill Lynch (Bank of America), cost the school more than $21 million since 2002, and is estimated to have negative fair value of $4.8 million as of June 2015.[237] The second Merrill Lynch swap was even worse for the school: from its beginning in 2007 to its termination in 2009, the swap cost the school $14 million in net interest, and then Wake Forest paid the bank more than $36.2 million in termination penalties to end the deal.[238]

The other three swaps, two with Wachovia/Wells Fargo and one with BB&T Capital Markets, follow similar tracks. In total, toxic swaps continue to cost Wake Forest more than $3.4 million a year in net payments, and have cost the school more than a $56 million in net interest payments alone.[239] The school has paid termination fees of more than $37 million and would have to pay another $12 million to exit the remaining deals.[240]

[230] National Center for Educational Statistics IPEDS Data Center, "Wake Forest University (UnitID: 199847) Price Trends," accessed May 2, 2016, https://nces.ed.gov/ipeds/datacenter/pricetrend.aspx.
[231] Wake Forest University, "Wake Forest University Student Financial Services, 2016-2017," accessed March 18, 2016, http://finance.wfu.edu/sfs.
[232] Wake Forest University, "Wake Forest Admissions Quick Facts," accessed March 18, 2016, http://admissions.wfu.edu/facts/.
[233] The Reynolds campus (distinct from the Wake Forest hospital) took in 293,431,000 in student fees and tuition versus 366,352,000 total operating expenses on that campus. Wake Forest University, "Wake Forest Consolidate Financial Statements 2015," p. 6, accessed May 2, 2016, http://finance.wfu.edu/files/2015-WFU-Financial-Statements.pdf.
[234] Wake Forest University, "Wake Forest Consolidate Financial Statements 2008," p. 30, accessed May 2, 2016, http://finance.wfu.edu/files/07-08finreport.pdf.
[235] 32 percent of all undergraduate students at Wake Forest University use federal student loans to help pay for their college education, averaging $7,294 per year. This amount is 20.6 percent higher than the $6,047 amount borrowed by freshmen, indicating an increasing gap between available funds and college costs, and an increasing reliance on student loans. College Factual, "Wake Forest University," accessed May 2, 2016, http://www.collegefactual.com/colleges/wake-forest-university/paying-for-college/student-loan-debt/#.
[236] Wake Forest University, "Wake Forest Consolidate Financial Statements 2009," p. 23, accessed May 2, 2016, http://finance.wfu.edu/files/08-09finreport.pdf.
[237] Wake Forest University, "Wake Forest Consolidate Financial Statements 2015," accessed May 2, 2016, http://finance.wfu.edu/files/2015-WFU-Financial-Statements.pdf.
[238] Wake Forest University, "Wake Forest Consolidate Financial Statements 2009," p. 52, accessed May 25, 2016, http://finance.wfu.edu/files/08-09finreport.pdf and Wake Forest University, "Wake Forest Consolidate Financial Statements 2013," p. 35, accessed May 25, 2016, http://finance.wfu.edu/files/2013-WFU-Financial-Statements.pdf.
[239] Wake Forest has spent $56,356,037.89 on swap payments.
[240] Wake Forest University, "Wake Forest Consolidate Financial Statements 2015," p. 34, accessed May 2, 2016, http://finance.wfu.edu/files/2015-WFU-Financial-Statements.pdf.

Problems with Transparency

In theory, the information a student or other stakeholder needs to do an analysis of their institutions' interest rate swaps is available in the school's annual financial reports (usually available on the school's website) and in bond official statements available through publicly accessible online databases. However, in practice, these documents do not always contain all the necessary information, and in some cases the documents themselves are not available.

At three of our potential case study schools—Whittier College, George Mason University, and Northwestern University—we found evidence of swaps, but could not find enough information to calculate basic costs. Whittier College was the least transparent school in our sample, as representatives of the college refused to give Roosevelt affiliated Whittier College students access to annual financial reports beyond the 2014-2015 academic year. That document didn't contain the necessary information to reconstruct the history of swaps. We had access to Northwestern and George Mason's annual financial reports, but these documents were missing crucial data. We do know that in May of 2007 Northwestern entered into an interest rate swap that it terminated only one year later at a cost of $9.1 million, but we have not included that in our cost data.

B- Methodology

Interest Rate Swap Sampling Methodology

To determine separate proportion estimators for public and private schools as well as an overall estimator, a stratified random sample was used. Proportional allocation was used with an overall sample size of 84 schools (57 private and 27 public, to create an overall bound around 0.1). To find out if a university was still making payments on a fixed interest rate swap, we searched for the school's available comprehensive annual financial reports, audited financial reports, and 990 Tax forms for the last 15 years. Many schools did not have a complete listing, but to create a conservative estimate, those without definitive evidence of a floating-to-fixed interest rate swap were marked as "no swap." The overall 95 percent confidence interval was constructed using a simple stratified variance formula (1), and each individual 95 percent confidence interval (public, private) was constructed using a simple variance formula (2). If schools in the sample shared financial reports (e.g., University of California, San Diego and University of California, Irvine), the swap/no swap was counted for each school individually.

Interest Rate Swap Net Interest Calculations

The research we have done here is work that students at other colleges and universities around the country can replicate fairly easily. We hope this discussion is helpful to students or other stakeholders interested in doing their own research, but anyone interested in doing this should also feel free to get in touch with us using the contact information included at the end of the report. We have some helpful materials to get you started.

For each case study, researchers combed through publicly available documents, primarily annual financial reports most of the educational institutions make available on their websites, and bond official statements available through the Electronic Municipal Markets Access (EMMA) website. EMMA (http://emma.msrb.org/Home/Index) is a service of the Municipal Securities Rulemaking Board (MSRB), the body that regulates municipal securities.

In most cases, most of the information necessary to analyze swap costs is available in annual financial reports. For example, annual financial reports contain details about how many interest rate swaps the schools has, which bonds they are connected to, and what the swap notional amount is; they usually include the interest rates paid by the parties to interest rate swap deals; often they contain counterparty bank information, so you can find out which banks are making the profits; and they often contain details about termination payments the institution has made

on swaps. Finally, they tell us what the termination penalty would be (as of the date of the most recent annual financial reports).

The bond official statements usually contain much of the rest of the story. Here we find the bond underwriters—the banks that pitched these deals to the schools. We also find details about what kind of bonds they are, what the interest rates or the interest rate structure is, and often, specific details on what the bonds are paying for. We also usually find the bond payment schedule, which helps us calculate how the swap notionals reduce over time.

How we did our swap calculations

To calculate the costs of the interest rate swaps, we multiplied the swap notional amount by the monthly interest rate paid by the bank counterparty, and by the monthly interest rate paid by the school, and then subtracted one from the other. The difference is the net payment on the swap, which in all cases examined here is a net cost to the school.

In any case where the information we had access to was not precise enough for us to use this simple method, we explain in footnotes what assumptions we use for our estimates.

There were a few cases where we didn't have access to all of the information we needed to calculate costs in our usual way. What follows is our explanation of how we reached our conclusions in those cases.

C. Specific Case Study Assumptions

Cornell University

Cornell's annual financial statements required a fair amount of deciphering. One problem we encountered was that swap notional amounts in the annual statements in some cases did not match what we would expect them to be given the related bond's payment schedule. The following are a few of those cases.

2000A: The notional decreases for the swap tied to the Series 2000A bond are based on a combination of the sinking schedule in the bond official statements, and the notional amounts listed in Cornell's financial statements. The exact relationship is relatively clear, and is detailed in the chart listed below the 2000A data, but does not exactly follow the sinking schedule, and in fact has $30 million added to the notional in financial year 2008.

2000B: The notional on the swap tied to the Series 2000B bond follows the sinking schedule found in the bond official statements, though this causes it to show a final notional amount at termination that is $430,000 less than the final notional listed in the financial statements. Therefore, our estimates of net interest costs may be conservative.

2004: The Series 2004 swap follows the notional amounts listed in the financial statements, as the decreases do not seem to follow the sinking schedule in the bond official statements in any detectable way. We decided to use the most recent information available, which was the info in the annual financial statement.

American University

At some point between 1985 and 2005, American University paid down some of the notional amount on the 1985 bond—it went from an original $52,100,000 to $48,900,000. Because we're unable to find the exact date the bond was paid down (the farthest back financial documents from American University is 2005 and the bond official statement isn't in EMMA), the calculations between 1985 and 2005 use the original nominal amount of $52,100,000 and the calculations between 2005 and 2008 use $48,900,000.

In May 2008, the American converted $37,000,000 of the Series 2003 bonds to variable rate demand bonds, and on May 29, 2008, the university converted $99,975,000 of the Series 2006 bonds to variable rate demand bonds. Both series were supported by a letter of credit from Bank of America. This suggests that the notional amounts of the 2003 and 2006 bonds had not decreased at all.

None of American's financial documents mention the variable rate that the school receives in the swap. As such, we assume the industry standard 70 percent LIBOR for that rate, which might yield a slightly more conservative estimate of costs to the university.