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Inked with Debt: An Overview of the Student Debt Market and a Potential for Change

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INKED WITH DEBT: AN OVERVIEW OF THE STUDENT DEBT MARKET AND A POTENTIAL FOR CHANGE

By

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Thesis Summary

In a world of rapidly escalating amounts of student debt, the current system harms college stakeholders. Whether governments (state or federal), students, universities, or the economy, all parties are suffering in the current student debt market. At this point in time, student loans have become a sizeable debt vehicle second only to mortgage debt in the United States. A majority of students use loans to attend school, which often become a major decision in post-graduation plans. In addition, it is the only form of debt not dischargeable in bankruptcy. Due to this, an alarming amount of Americans have become ensnared in student loans – loans received with the goal of self-betterment in furthering one's education.

This is also a problem that affects the US economy. Early homeownership or business creation have decreased, individuals have put off first time car purchasing, delayed having children, and even are struggling to save for retirement down the road. Due to the increased complexity of student loans over the years, many Americans do not understand their loans or how to repay them. The intricate web of debt collectors, debt servicers, the government, and education institutions has cornered the student and made it increasingly difficult to find out who stands to gain from the current system. Meanwhile, students have begun to question whether college is worth it in the first place. What has generally become a socially acceptable norm, a college education is being questioned for the first time in decades, yet the ever-evolving job market becomes more demanding of higher education.

In the midst of all this, responsibility is often placed on the students or the government, while the universities themselves are equally in need of criticism and change. Continued increases in tuition and other expenses, in addition to the various harms of for-profit colleges, have caused a headache for both the consumer and the lender.

In a world of $1.3 trillion of student debt spread across 40 million Americans, actions must be taken to solve this issue. America arguably has a duty to insure that each individual has both the opportunity for education, and also the ability to pull one up by his or her own bootstraps and move on in the event that college did not work out. By observing the history of the student loan market and where it is today through a holistic view of the colleges, ways of paying for school, problems with student loans, and possible policy changes, one can make educated decisions about what needs to be done to improve our current student loan debt crisis. Through research and financial tools, Professor Jones and I have created a working model to illustrate a suggested fix to student loans in Income Sharing Agreements (ISAs). A potentially more profitable, less harmful, and increased method of risk sharing, ISAs show promise as a viable overhaul to the student debt markets. In a number of other countries, the private sector has used this tool to achieve educational success, while granting above average returns to investors. For this to occur in the US, the legal groundwork is still in the process of materializing to create equitable guidelines. In addition, a number of politicians, legislators, and even presidential candidates have shared – and sometimes implemented – their own suggestions. Improving the system will by no means be an easy task, but it is undoubtedly a necessary one.

Individuals today argue, “Student debt is a product that has been sold to us with such repetition and intensity that most people believe they can’t live without.” Education without debt can be possible for all individuals, although debt is not always a negative burden. The goal is to create a system, in which investors in education can invest wisely both monetarily and in postsecondary educational choice. The goal is to create a system most conducive to the future success of the student, which in turn promotes the future success of the American people and the economy of the United States.

Introduction

The market for student loans has quickly come to the forefront of national news due to its vital position in influencing one of the single most significant issues a nation faces: the education of its citizens. An epidemic that now affects a vast majority of the American population, student loans are currently held by nearly seven in 10 graduating seniors (The Institute for College Access and Success, 2015). Student loans have quickly grown to the second highest amount of household debt in the country, falling short only to mortgage debt. The United States government holds an extreme amount of these loans on its balance sheets, to the tune of 40 million Americans with outstanding debt totaling a whopping $1.016 trillion and counting (Berman, 2016) (U.S. Department of Education, 2015). More importantly, one cannot ignore the fact that – unlike mortgages or any other type of debt – student loans are not discharged in bankruptcy, meaning that the cost of an education is with students for life. Not only is this an issue on the minds of millions of college students worldwide, but it is also a problem that affects parents, educational institutions, and the American taxpayer.

Between the rising costs of a college education, low graduation rates, and the overall question of whether college is now a worthy investment, the issue of student debt is reaching a pivotal breaking point. To put these issues into scope: the average published tuition and fee price of a full time public four-year education is now 40% higher in 2015-2016 than in 2005-2006, after adjusting for inflation. For private nonprofit four-year institutions, this amount has raised 26% (College Board, "Trends in College Pricing", 2015). In regard to graduation rates, College Board reports show that of the students enrolled in the 2003-2004 school year, 51% have not yet received a degree of any kind; 36% of which have left without return, 15% are still enrolled (College Board, “Education Pays”, 2013). To show the impact of the 2007-2009 recession, Nate Silver's FiveThirtyEight reports only 52.9% of those enrolled in fall 2009 have earned a degree, as compared to the 56.1% degree completion rate of the fall 2007 class. Lastly, one may address the question of whether college is still worth the investment today. Obviously a heavily debated topic, David Leonhardt of the New York Times argues that, "Yes, college is worth it, and it's not even close. For all the struggles that many young college graduates face, a four-year degree has probably never been more valuable." On the other hand, it's very important to address the significance of the above issue – not everyone graduates. FiveThirtyEight writes that, as Leonhardt acknowledged in his article, wages for students with some college but no degree have stayed stagnant, all while debt levels have increased. Thus, many individuals could potentially be in a worse spot than they were before enrolling in college.

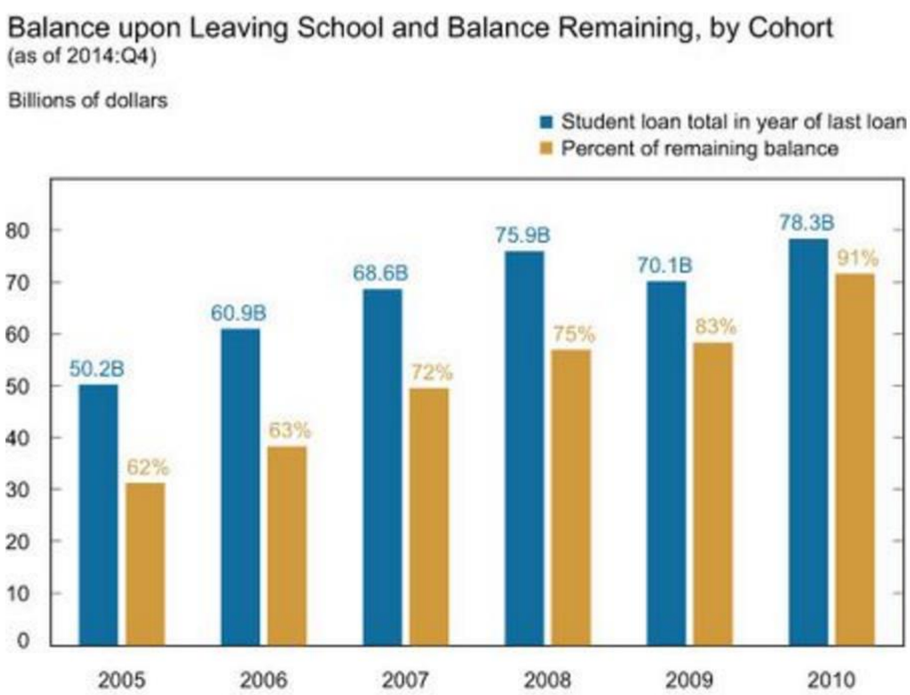

Figure 1. Percentage balances remaining by year of debt issuance (NY Fed, 2015)

Whether a graduate or not, the most alarming of all these issues with student loans can be found in the exorbitantly high default rates, and how slow debt repayment has been over the years, as seen in Figure 1. (Federal Reserve Bank of New York). As of August 2015, 7 million Americans were listed as in-default on student loans. In other terms, that means about 17% of all borrowers are currently in default (Mitchell, 2015). Some have begun to stop picking up the phone for debt servicers and collectors, but many are unaware that the Treasury Department has the power to garnish Social Security, tax refunds, or wages from an individual that is delinquent on his or her student loans (Lorin, Dec. 2015).

Needless to say, these pressing issues in our educational system and its financial repercussions have reached fever pitch in the American political landscape. United States Presidential hopefuls have begun voicing their opinions in a number of ways, from simply stating opinion, to laying out concrete plans and policy changes. Candidates including Marco Rubio, Bernie Sanders, Jeb Bush, Hillary Clinton, and many others, have all been quite vocal on the issue. From free higher education, to a $50,000 line of credit for students, to various income sharing or repayment based plans; the candidates have generated a number of different solutions to our current student loan burden (Credible, 2015).

One of the biggest topics in student debt includes the debate of how much of the burden should be held by the government, and how involved the private sector should be in the underwriting and maintenance of student loans. Mark Weadick, Managing Director at Student Loan Capital Strategies, suggests future legislation should promote involving the private sector in the student debt market. Mr. Weadick included that the cost of a college education has risen to a fairly ridiculous level, and the American taxpayer should not be carrying so much of the burden. All in all, government-lending programs have produced a large amount of debt that has become increasingly difficult to service (Weadick, 2016).

In summary, the portion of the government deficit increasing due to student debt has reached an unsustainable level, and blame for this can be cast in any number of directions. The United States Government, the educational institutions across the country, and of course, the students, all must work together towards a better solution in funding education. By addressing this issue in manageable parts, such as increasing graduation rates, finding a fair price for education, and enabling everyone the opportunity to receive a post-high-school education, there is hope of reversing the rapidly increasing amount of student loans, observed in Figure 2. (Berman, 2016).

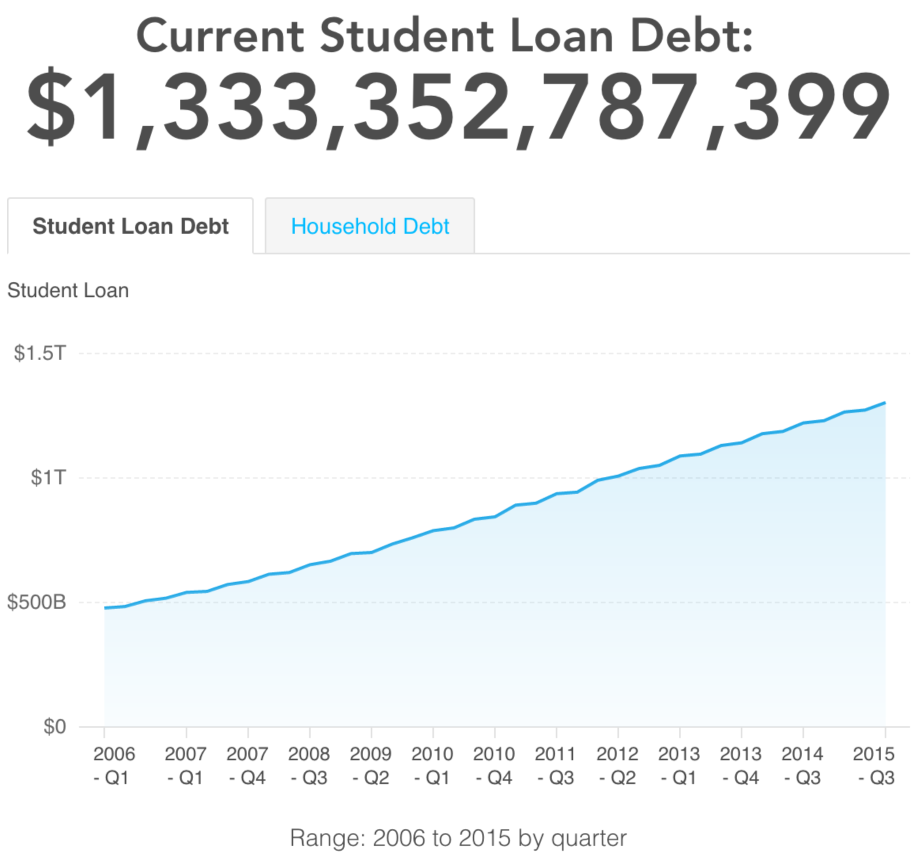

Figure 2. The National Student Loan Debt Clock raises $2726 per second (Market Watch 2016)

From the Mortgage Crisis to the Student Loan Debt Crisis

To understand how the market came to where it is today, one must begin by looking at some of the history of student loans – especially as they neared their peak, and subsequent downfall, during and after the 2007-2009 financial crisis. To preface this portion, it is necessary to clarify that while the current student loan crisis is indeed a crisis, it does not even begin to match the scope of the mortgage debt in the Great Recession. This type of debt only matches about one tenth the amount of the mortgage debt in the aforementioned financial downfall. The purpose here is to bring attention to some similarities between the two, and to emphasize the importance of what is occurring in the student loan market today.

Parallels

Just after the worst of the Great Recession was over, the highest amount of student loans was issued for one academic year in 2010-2011: $124 billion (College Board, “Trends in Student Aid,” 2015). Just before The Recession, Student Loan Asset Backed Securities (SLABS) were an increasingly popular commodity. Loosely put, SLABS are essentially bonds backed by pools of students’ outstanding loan debt, much like the mortgage-backed securities that played such a large role in the financial crisis. The big difference here, though, is that SLABS do not have any collateral backing (like mortgages do with the underlying value of the home). These securities reached their peak issuance when nearly $90 billion in SLABS was issued in 2006, followed by a decline to less than $30 billion in 2008, from which the decrease continued until leveling off around $10 billion in 2014. Underwritten and issued during a time of extraordinarily lax credit standards, like mortgages, SLABS fell at a similarly rapid trajectory. Already having been sold for more than they were initially worth, these securities fell with the value of student loan debt portfolios at the time – some portfolios seeing default rates reach 80%. Eventually portfolios of loans were being sold for roughly fifty cents on the dollar of their original value. Along with the private lending crisis in student loans at the time, the federal government began to cut subsidized loan programs (in which the government pays the interest on the loan while a student is in school). Due to this cut in subsidized loans, fewer loans were offered, and fewer students were interested in signing up for unsubsidized loans, in which the interest begins accumulating as the money is issued (Weadick, 2016). Figure 3 illustrates the decrease in both private and federal loans after 2010.

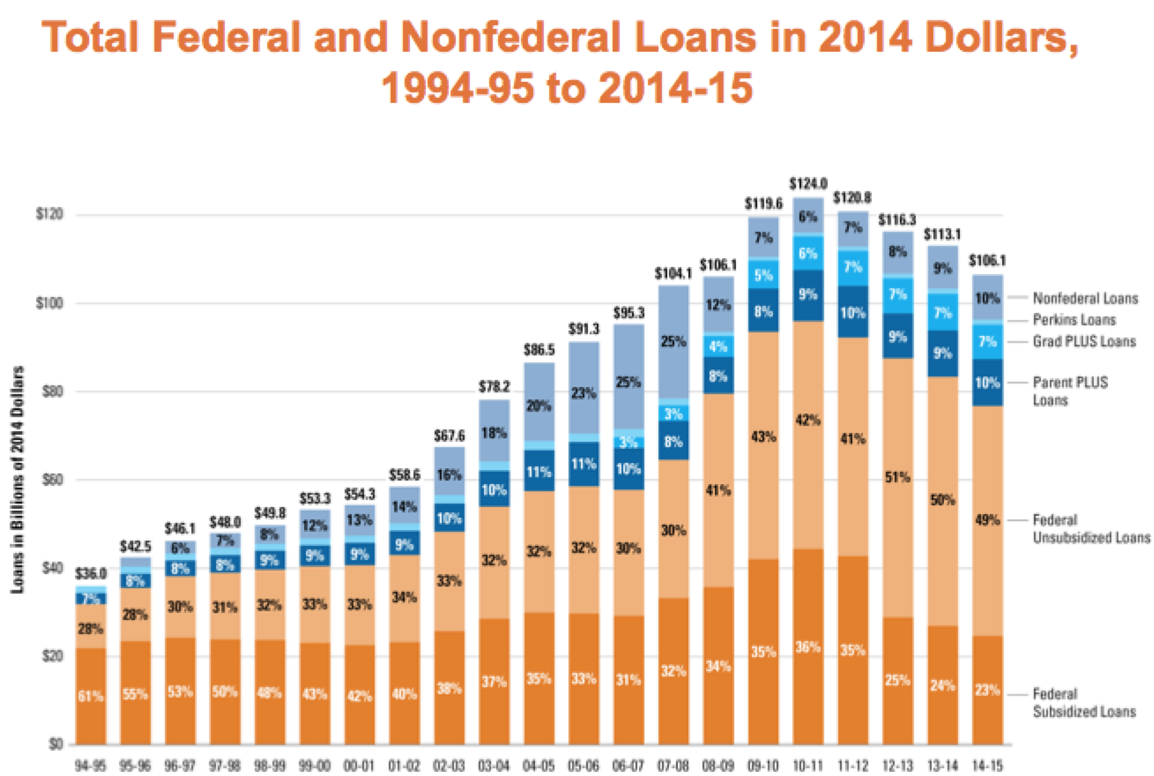

Figure 3. The rapid increase, then drop off of student loans before and after 2010-2011 (College Board, 2015)

Since this decrease in federal loans, and rapid plummet in private loans, federal loan issuance each year has either declined or stagnated, while private loans have made small steps year over year (although private lending remains a shadow of what it was previous to 2010). One benefit that came from all of this was a crucial tightening in credit standards for private lenders. Prior to the crisis private lenders only required co-signers about fifteen percent of the time, and now this number sits around 85% of loans (Weadick, 2016). While government loans do not benefit from the selectivity that private lenders can afford (i.e. the premise of federal student lending), bank loans in repayment and seriously delinquent (more than 90 days) are only at a level of 3% – compared to the government's 21% (Bidwell, 2013).

Post-Recession Market

Today, the student loan market is almost universally controlled by the United States government, which accounts for about 93% of student loans (Andriotis, 2015). The majority of these loans are through federal unsubsidized loans (49% of all loans issued in 2014-2015), although subsidized (23%), and Grad and Parent PLUS programs (17%) also constitute large portions (College Board, "Trends in Student Aid," 2015). Since the recession, the most significant change in federal loans includes the discontinued issuance of Federal Family Education Loan Program (FFELP) Loans on July 1, 2010. FFELP loans were issued through private lenders, and were guaranteed by the government. This meant that if students defaulted on these loans, the government took the financial burden in place of the financial institution that issued the loan. This program also contributed to the liquidity of these loans during the private sector's involvement in student loans and securitization. After this time, all federal student loans have been a part of the Federal Direct Loan Program, which created a program in which all loans were funded directly by the government through the Department of Education (EdFinancial Services, 2016). Although all newly created federal loans are a part of the direct program, many FFELP loans are still outstanding and guaranteed by the government.

Investing in a College Education

Now that the scene has been set for today's student loan landscape, it's important to take a step back and address an important question before moving forward: is college worth it? And if so, what are the options available for funding the investment.

The Value of a Degree

For the first time it seems in decades, people have begun to consider whether an education after high school is really worth the investment. While there are thousands of articles, studies, and journals debating this question, the inquisition really comes down to each person's own opinion and situation. Is a college education going to be necessary for every individual's future success? Probably not – everyone can name at least one successful/famous American who achieved their dreams without a college education, but each year an increasing number of professions require a degree. And speaking of successful college dropouts, Bill Gates states, "Getting a degree is a much surer path to success." He goes on to contend, "By 2025, two thirds of all jobs in the US will require education beyond high school" (Bort, 2016). So, while a degree is not a prerequisite to success, it is correlated with success, and it's essential to explore both the positives and negatives of attending college.

To begin with the potential benefits of seeking education past high school, many today argue vehemently that this is a necessity to have a fruitful life and career. Some of the most persuasive reasons include higher earnings potential in the future, increased employment rates, and a slew of other proposed benefits. Returning to Leonhardt's notable New York Times article mentioned earlier in this report, "Americans with four-year college degrees made 98 percent more an hour on average in 2013 than people without a degree. That's up from 89 percent five years earlier, 85 percent a decade earlier and 64 percent in the early 1980s." Thus, if the average debt for Americans leaving college is somewhere in the $25,000 to $30,000 range, college debt pales in comparison to the economic benefits of receiving a four-year degree (keep in mind this is for those that not only graduate, but also attended four-year institutions). To put this into visual perspective, Figure 4 illustrates just how much difference college has made over time:

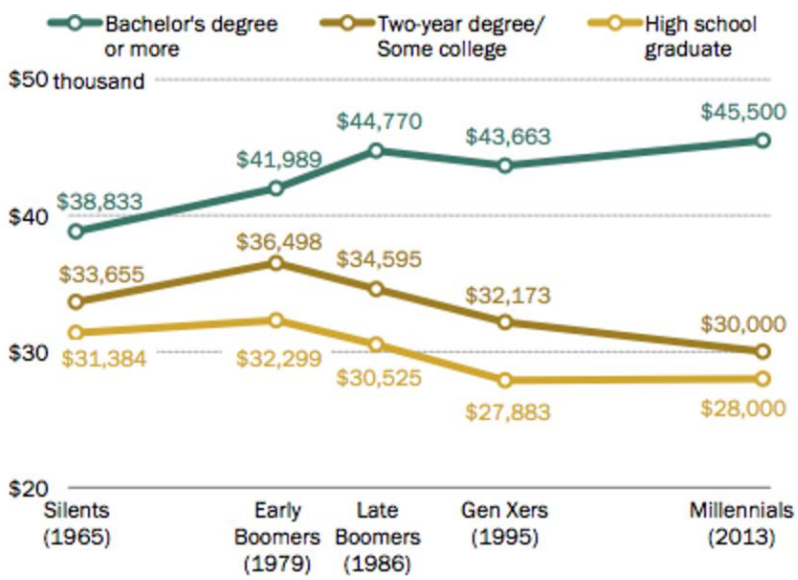

Figure 4. Median annual earnings among full-time workers ages 25 to 32, in 2012 dollars (Bloomberg via Pew Research Center, 2014)

Rick Fry, the Pew economist who performed this data analysis, argues that degree earners can expect to earn about $500,000 more than they would have without pursuing class past high school. In addition to the earnings premium, college grads can expect a higher level of employment in more desirable positions. According to the Bureau of Labor Statistics as of December 2015, the unemployment rate for those who had attained Bachelor's degrees was 3.5

percent, compared to the 6 percent of those who only possessed a high school diploma (Associate's degree individuals sat at 4.5 percent). So not only do college graduates earn more in jobs they are more likely to possess, but an article by Bloomberg News asserts that they are more likely to be union represented, almost twice as likely to have a place in a pension or retirement plan, and more than twice as likely to be a salaried employee (Kitroeff, Feb 2015). Lastly, College Board's "Education Pays" research report adds that college graduates have increased job satisfaction and social mobility, and lower rates of smoking and obesity.

While there may not be many stalwart arguments 'against' a college *degree* – rather than the price tag, or specific individual circumstances – deciding whether to pursue a college education in hopes of a degree remains a different story. As mentioned in the introduction, the single largest problem in levering up for college is the risk of not graduating; this includes the opportunity costs, financial burden, and all that comes with cumbersome student loans. At the same time, many high school graduates have recently been deciding to forego college and immediately entering the workforce. After a surge in college attendance during and just after the Great Recession, just under 66 percent of the 2013 graduating class enrolled in further education. For 18-24 year-olds, this is the largest decline in two decades, and the lowest overall rate of enrollment since 2006. The worst part of the overall decline remains that this is mostly influenced by the major decline in part-time and community colleges, which tend to be those on the fringe about whether to attend school or not. Meanwhile, four-year college attendance has risen (Casselman, 2014). When the government offers its student loan program and other forms of aid, these are the individuals it aims to help most – those that can break the cycle of poverty. A major goal of the aid programs is to enable social mobility. In a 2013 report, College Board found that in the bottom quartile of households by income, of the children in those homes without a bachelor's degree, 47% stayed in the bottom quartile. Of those in the bottom quartile that received a degree, 10% did not progress to a higher income quartile; however, of those that received a bachelor's degree who grew up in the bottom quartile 10% reached the top income quartile. Overall, scholars in education, politics, social activism, etc. have realized that the single best way to better oneself and break the cycle is through a post-high-school education. For those students that do decide to take the risk of attending, it's vital to make informed, intelligent decisions to increase one's chances of receiving a degree, thus lining oneself up for an improved quality of life and career. Some of the ways students can do this is through researching schools – looking at graduation rates (especially four-year rates; those with the most debt took the longest to graduate), what majors are most likely to succeed or have the highest demand today, prices and scholarship options, among other metrics. Too many students today jump into college entirely uninformed on their university, program, or financial backing. Even worse, many fall to the hands of for-profit colleges after seeing late-night commercials for online degrees, which often mirror tantalizing get rich quick schemes or payday loans (a topic for a later time).

Funding Avenues

This may seem obvious, but far too many individuals who have found themselves mired in student loans jumped in far too quickly. Many students have taken out more than they needed, or not attained funds in the cheapest ways possible. Funding college should really be five easy steps, in this order: an individual and their parents, friends and family, scholarships and grants, federal loans, and private loans. Of course the obvious source here is to look to personal savings and what parents are willing to contribute. It's necessary here to decide that if a student/his or her parents do have the capital to pursue a degree, what schools are in their range? Is it worth pursuing further funding for that expensive dream school? This is obviously a question for individuals to decide. From here, one may consider friends and family – this could be anyone from wealthy siblings, to successful mentors or grandparents. Next remains the last of the 'free' money sources found in grants and scholarships. According to College Board, for the 2014-2015 school year, 22% of all aid given was from institutional grants (this is second only to federal loans at 34%). In addition, Federal Pell Grants accounted for 16%, private and employer grants contributed 6%, and state grants composed 5%. There are thousands and thousands of scholarships and grants students can apply for beyond just general university scholarship pools – these are great ways to finance an education. Next, we move to Federal Direct Loans, the topic of this thesis, which will be discussed further in the future. For now, it's simply important to know that this is often the cheapest way to pay for school with debt. Lastly, private lending remains a last case scenario. The catch with private lending remains that these lenders exist to make money. They do not aim to treat everyone the same, like the government does. Depending on one's family financial situation, previous credit, and whether they have a co-signer or not (almost all do nowadays), rates may be much higher than those offered through the federal loan program. On the other hand, rates can also be more favorable in some cases. This makes private lending largely a last resort for any financing needs leftover. At the same time, private lenders often offer better debt servicing than federal loans, and have gotten better at trying to work with borrowers. In addition, some private lenders may propose a great option for specific individuals – those with solid income and great credit looking to fund graduate school can often find great deals for loan consolidation through up and coming lenders like SoFi and Common Bond. These two specifically deal with some of the most robust-credit customers, and create pools of debt that can be securitized and sold off (some of the only active and profitable ones in the current SLABS market mentioned earlier).

Issues with Loans

In all honesty, finding a place to start describing the flaws in student loans presents a challenge in and of itself – these instruments remain a juggernaut only increasing in complexity year after year. Student loans continue to be a problem due to this complexity, the vast amount of individuals they have an effect on, their highly debated stature in today's political and educational landscape, and other unexpected adverse effects.

Lack of Education

To describe the sheer scope of how confusing student debt can be to its stakeholders, a 2016 study by a loan-refinancing lender, Lendedu, was reviewed by Bloomberg News and offers some shocking information about how little students know about their loans. The study found that of 477 Bay Area students at three different campuses, only 6 percent knew how long they would be paying off their debt, and only 8 percent knew the interest rate they were paying on the outstanding amount. Even scarier, 73 percent of students believed that former student debt collector, Sallie Mae, is a person. Further, 59 percent of students reported that the federal student debt burden remains in the "millions" – a far shot from $1.3 trillion. Another study conducted involving 599 undergrads, found that just 38 percent knew how much money they had borrowed to attend college. The study also found that only 52 percent of individuals knew what their educational institutions were charging them for tuition and room and board. Lastly, a survey released by The Federal Reserve Bank of New York found that just 28 percent of borrowers knew the government can garnish wages, social security, and tax refunds for repayment. Only 37 percent understood that it is extremely difficult for student loans to be discharged in bankruptcy. Akers and Chingos, authors of the Brookings report, write of debtors, “The consequences of their decisions come as a surprise to them once it’s too late" (Kitroeff, Feb 2016).

Misplaced Incentives

Possibly the most controversial part of the student debt markets is who profits from them. Not only does the federal government charge interest on their loans (although these rates are often – but not always – the most favorable available, some contend the government should not profit from the system), Uncle Sam also pays debt servicers and collectors hundreds of millions a year to try to retrieve the borrowed cash. FMS Investment Corp., one collector of student loans, was paid $227 million by the Education Department for its services between October 2011 and September 2015. In 2008, the government began a loan-repurchasing program to increase liquidity following the crisis; in the first two years of the program, SLM Corp. (Sallie Mae), reported gross revenue of over $600 million. One individual who worked for government-contracted debt collector Educational Credit Management Corp (ECMC), brought home $454,000 in one year, a number reported as “more than twice the pay of the U.S. secretary of education.” The CEO of ECMC earned $1.1 million in 2010 (Hechinger, 2012). Today, now that the federal government directly issues student loans, its collectors were paid a total of $963 million in fiscal year 2015 (and $1.1 billion the previous year). In return, these collection companies recovered about $9 billion on more than 1.5 million student loan accounts between 2011 and 2013. In addition, many incentives remain in place to artificially deflate the already high reported default rates. Collectors and servicers often convince students to go into deferment or forbearance on their loans, rather than default, which only creates a higher balance to pay down the road (Lorin, Dec 2015). On the bright side, in December 2015 Congress passed a law onto the US Department of Education making it easier for other debt servicers and collectors to receive business from the government. In the past, four contractors were responsible for 74 percent of borrowers who had recently left school. The borrowers who were contacted by these companies were also three times more likely to default on their loans, than if they had been serviced by any of the other six smaller contractors (the remaining 26 percent) competing for their business. To put it in perspective, one of the big four, Nelnet, reports a 36 percent delinquency rate. Making a more equitable playing field for all in the industry will benefit all parties. The government and its tax payers will be more likely to have the debt paid back, while borrowers will receive more help and attention through good and bad times. With nearly one in five borrowers in default – and default rates increasing each year – the US must do everything it can to reverse this detrimental trend (Nasiripour, 2015). To sum up the issues of government-contracted collection, Robert Shireman, a former Education Department deputy undersecretary states, “The student loan system is unnecessarily complicated, and at each stage of the process, someone is taking a slice either from the borrower or from the taxpayer. It’s an illogical system because the pain that we’re inflicting is not worth what the taxpayers are paying, and it’s the wrong approach to take from people who were trying to do the right thing by getting themselves an education” (Lorin, Dec. 2015).

In addition to the added complexity of servicers, collectors, and large government-contractor checks, there exist some small intricacies worth noting that often increase borrower confusion. For one, the Department of Education has introduced a number of ways to pay back loans. Some of these include income-based repayment, which remains a great option for distressed borrowers, but can also have adverse affects for others. Specifically, reducing monthly payments to only 10 percent of discretionary income can result in reverse, or negative, amortization – meaning that the balance of the original loan can actually increase over time. If this occurs, it's also possible that a growing outstanding amount can negatively affect a borrower's credit score. Also significant to note, regardless of how student loans affect a borrower's credit score, these magic credit numbers are now not only being used by banks and lenders, but also are now being observed by some potential employers. On the other hand, it is a relief for some borrowers to know that after 20 years (25 for graduate students) of income-based repayment in the government's new REPAYE program, the outstanding amount can be forgiven (Kadlec, 2015). Looking to the private side, other borrowers have been ensnared by the aforementioned co-signer requirements used by banks and other private lenders. According to the Consumer Financial Protection Bureau as of June 2015, 90 percent of borrowers who tried to remove a co-signer from their loan were unable to. Many individuals were denied for reasons like making too many early payments, or having a credit score too low even though a threshold was not stated. This can have disastrous effects for either party in certain circumstances, like a co-signer dying or going bankrupt, calling for the borrower's entire repayment of the loan. Bloomberg asserts: "You and your co-signer are probably in it for life" – something extremely important to consider before taking out a private loan (Kitroeff, June 2015).

Discharge Difficulties

Next, and most controversially, is the current debate roaring on in the legislature and many courtrooms regarding loan forgiveness – a rare occurrence in student loans. The reason these loans were designed this way was with the idea in mind to protect the government's balance sheets and the taxpayers' money. By making student loans difficult to extricate oneself from, it has kept individuals from simply accumulating careless debt, only to declare bankruptcy in an effort to skirt their loan obligations. Thus, in the 1970's, Congress established that a student loan can only be discharged when the borrower can prove that repayment would cause them "undue hardship;" although, not much precedent has been set to describe what constitutes as such. A few cases suggest one must prove a "certainty of hopelessness," "total incapacity," or that repayment would "strip [the debtor] of all that makes life worth living." Lawyers for the Education Department have motioned to take the most stringent approach to this definition, warning borrowers that when they borrow money from the federal government, it will be paid back in full. The Education Department states the laws are set up this way so "that borrowers do not use bankruptcy as an expedient means of freeing themselves from an obligation to repay the funds used to finance their own or their children's education." Making it even more difficult to receive forgiveness in impossibly tough financial times, the new increase in availability of income-based repayment plans to the government has further closed the door to saying repayment would pose an "undue hardship" on a borrower (Kitroeff, Dec 2015). Among the litter of borrowers who have taken their cases to court, some even reaching The Supreme Court, not many have walked out heads held high. Unfortunately, any small concession to a borrower in the court system would open up the door to the other 40 million Americans who would rather not pay back significant amounts of debt (Kitroeff, Oct 2015).

While loan forgiveness for the sheer pain of paying insurmountable amounts of debt may be hopeless, some borrowers have found hope in a previously irrelevant federal law. In the second half of 2015, over 7,500 borrowers owing $164 million have come forward stating that schools have defrauded them. For students who can prove that their schools employed illegal tactics to recruit them – such as falsified admissions statistics about future earnings or graduation rates – student debt can be forgiven. $28 million in student loans for 1,300 students that previously attended any of the Corinthian Colleges have already been cancelled. The Corinthian Colleges were a for-profit chain of schools that liquidated in bankruptcy in 2015. In many schools, students were promised great facilities, professors, and job placement, but not many received these benefits. Even though some schools did not hold up to their end of the bargain, it's difficult for students to prove statements they were simply told verbally by a university recruiter. This may be an expensive way for the government to clean up after the lies of individual universities, but, like businesses, educational institutions should be held responsible for the methods by which they recruit individuals. Unfortunately in the case of Corinthian, the government was unable to receive retribution for the lost outstanding loan payments. Since this is a new law being used, the government and students have struggled to find common ground on what constitutes as fraud, and how the government can receive payment for the loans it forgives. Also a possibility, activist groups are seeking that in certain instances entire classes are granted debt forgiveness, instead of just individuals. Some are worried that this may become too broad a way to receive debt forgiveness, and that the bill will fall on the taxpayers. Andrew Kelly of American Enterprise Institute states, "It gets much more difficult when students say, 'Well, I was told this would improve my job prospects.… I don't have a job, and I'm mad about it, and I think I'm defrauded.'" Also important to note: almost all of these claims have come at the hands of for-profit schools – an issue that will be discussed in length later (Mitchell, 2016).

Adverse Effects on the Economy

With economic data, hindsight is often 20/20. Not many predicted that due to burdensome student debt many individuals would put off buying a home, saving for retirement, or even starting new businesses. Borrowers are being held down by the weight of their student loans, and this has become evident in both economic and social measures. Mitch Daniels, president of Purdue University and former governor of Indiana, argues debtors “are postponing marriage, childbearing and home purchases, and...pretty evidently limiting the percentage of young people who start a business or try to do something entrepreneurial. Every citizen and taxpayer should be concerned about it." To start, the previous milestone of homeownership for young professionals is less unattainable than it once was. For Americans under age 35, homeownership has gone from 43.3 percent in first quarter 2005, to 34.6 percent in first quarter 2015. Not only are individuals simply holding back from buying homes on a personal level, but some are also denied mortgages by lenders who take student debt into account within their due diligence. Among first-time homebuyers, 23 percent reported it was difficult to save for a down payment – 57 percent of those who reported difficulty attributed struggling in saving to student loan burdens. Next, millennials have abandoned what many perceive as “public interest” jobs like social work or teaching, to chase higher paying jobs allowing them to more rapidly rid themselves of debt. Having more financiers and technologists and less teachers or health care professionals could hinder the wellbeing of the US in the long run. In addition, researchers at the Federal Reserve Bank of Philadelphia have discovered that higher levels of student debt lead to less new businesses being formed. It appears that the student loan weight is exceptionally heavy upon the shoulders of creative entrepreneurs and innovators (Holland, 2015). The Wall Street Journal reports that between 2010 and 2013, the percentage of younger people owning parts of new businesses dropped from 6.1 to 3.6 percent. Over the last decade, the percentage of individuals under 34 years old beginning businesses has dropped from 26.4 to 22.7 percent (Daniels, 2015). Lastly, loans have an adverse effect on retirement saving for borrowers emerging from college. According to research from Boston College's Center for Retirement Research, currently 52 percent of Americans are at risk of a shortfall in retirement saving – this includes a student debt load average of $18,000. Once raised and adjusted to the average 2013 student debt load of $31,000, this statistic raises to 56 percent of individuals at risk. This research puts student loans into perspective by stating, "a 19.6-percent across-the-board benefit cut in Social Security (exempting current retirees) to eliminate the program's long-term financing shortfall would raise the NRRI by 10.7 percentage points. Extrapolating the effects of the growth in student debt into the future has an impact that is roughly half as large as a huge and unprecedented cut in the nation's main source of retirement income."

Issues With Colleges

When it comes to the student loan crisis in America, it's difficult to decipher where responsibility ends or begins. As many of the grievances with the government and student roles have been addressed, colleges actually providing the service remain directly responsible for the educational environment, and partly the increasing debt that comes with it. Rising costs of attending college, students struggling to pay back loans, and the harm of for-profit colleges continue to handicap the loan program and student debt burdens.

Price Increases

As touched upon in the introduction, the cost of attending college has skyrocketed. This applies not only to tuition, but also the cost of room and board, textbooks, and other fees. College Board's Trends in College Pricing 2015 looks optimistically upon the fact that while these rates continue to increase, the increases between 2005-06 and 2015-16 school years are lower than they were for schools between 1995-96 to 2005-06. For published in-state tuition at public-four year institutions and private non-profit four-year institutions, the rates declined from 4.3% (05/06) to 3.4% (15/16) and from 3.0% (05/06) to 2.4% (15/16), respectively. While this is an improvement, one must take into consideration the lower rates of inflation recently, causing larger rates in real tuition and fees and room and board rates. Today, the average total charges (published tuition and fees and room and board) for in-state students in the public four-year sector are $19,548. Out-of-state tuition for these schools rings in at $34,031. Private non-profit four-year institutions charge a published average of $43,921/year. Estimated average tuition and fees for full-time students in the for-profit sector and public-two year colleges are now $15,610, and $3,435 (in-district), respectively. While rates have continued to increase well above inflation patterns of late, it is of consolation to note that institutional grant aid from universities has also increased – an encouraging statistic, although not all students receive this help (College Board, "Trends in College Pricing", 2015).

Due to the substantial influence of education lobbying in Washington, universities will more likely than not have the ability to continue this trend of increased prices. University lobbyists continue the push every year for increased borrowing limits on federal loans, so that the Education Department can continue to front a large portion of the bill on post high school education in America. For graduate students specifically, individuals have been able to receive up to $80,000 per year for tuition and living expenses for the past nine years and counting. The University of California system, Cornell, Boston College, Fordham, Georgetown, Harvard, Northwestern, and Vanderbilt, among others, have all indicated lobbying on loan limits in public filings (although some have not indicated whether for or against). This type of lobbying has been going on for decades, as many graduates of top universities now serve in government positions and want the best for their alma maters. Some universities have even taken their lobbying in-house and opened Washington, D.C. offices. The educational institutions argue that without these generous loans, low-income individuals would never be able to afford to attend some of the top programs in the nation. One example that puts this in perspective, remains the average debt level for students who pursue medical school: $176,000. At this price, I personally could pay for my own four-year education at the University of South Carolina, assuming a non-scholarship out-of-state rate, more than three times over. All in all, there remains plenty of support to establish more stringent limits on student loan amounts, even amongst some public institutions. On the other hand, Jonathan Burdick, vice provost for enrollment at private University of Rochester, argues, “They know what they are doing. People are not as dumb as the public dialogue seems to think they are” (Lorin, Sept. 2015). I would not argue necessarily that people are “dumb,” but I would contend not all students understand what they are getting themselves into with student loans. I, personally, having never earned more than $10,000 in a year, cannot fathom being $176,000 in debt with no guarantee of a degree or a job. There’s simply too much money riding on individuals getting to a position adequate for repayment.

Repayment Rates

Much of this paper has discussed default rates as the benchmark for the student debt crisis, although repayment rates sometimes do better to frame the scope of the issue at hand. These are especially telling for universities who traditionally enroll lower-income students who have the most trouble paying back their loans after school, assuming that they graduate. In the 1990’s, Congress created the cohort default rate, which helped to combat schools with exceptionally high default rates by cutting them off of the federal aid program if they had too many defaults. This did a great job of kicking institutions out with unbearable rates of default, but it also encouraged institutions and students to avoid default at the risk of never making real payments to decrease the balance of loans. The program sets limits of 30 percent default rates of any institution for three years in a row, or 40 percent in a single year, to stay in the federal program. This does not account for individuals who default years after leaving, or those students who have difficulty repaying loans but avoid default. To adjust for this, the Education Department developed a new way to examine loans, called nonrepayment rates. This includes individuals who have not paid any amount of principal on their loans – students only paying interest, deferring loans by attending graduate school, or those who were granted extensions. One conglomerate of for-profit colleges, American National University, maintains an 8.5 percent default rate, but a five-year nonrepayment rate of 71 percent. This creates a significant problem, because even while students delay paying their loans for economic hardship or otherwise, interest continues to accumulate. This is not limited to only for-profit schools. Georgia State, Universities of Cincinnati, Louisville, Houston, South Florida, and Alabama all have single-digit default rates and 5-year nonrepayment rates in excess of 20 percent. Over 700 colleges and branch institutions still remain eligible for federal aid, even though they carry 7-year nonrepayment rates in excess of 50 percent. Some of the worst default and nonrepayment rates can be found at Historically Black Colleges and Universities (HBCUs), who have endured struggles of racial disparity throughout the years. These universities remain exempt from the cohort default rate, although all 25 of the highest nonrepayment rate public universities are historically black. 22 out of the 25 highest private universities are HBCUs. These are not traditionally expensive institutions, yet many of their attendees struggle to find jobs post-graduation allowing them to pay off their debt. This issue raises a red flag for both struggling HBCUs and all university rates of nonrepayment (Carey, 2015).

For-Profit Institutions

Another increasingly popular topic in the student debt debate, for-profit colleges have come under increased scrutiny in recent years. As an introduction, for-profit colleges are often exactly what they sound like – colleges run by substantial, publicly traded companies, or private equity firms, who answer to the interests of shareholders. In search of returns, these institutions recruit high numbers of students with questionable methods, and do not always make returns on their promises. Concerns towards students at these schools tend to begin and end with tuition payment, regardless of who pays the bill. One of the reasons for recent attacks on for-profit schools lies directly in their impact on federal student loan debt. At for-profits, 96 percent of students take out loans, and the average student ends up with $40,000 in debt. In addition, a 2012 study found that as the government raised federal aid amounts, for-profits closely matched these increases with surges in tuition (Surowiecki, 2015). Next, one can argue parallels between for-profit student loans, and subprime mortgage loans during the crisis. In the Great Recession, the underwriters of subprime did not pay much attention to the creditworthiness of the loans, just as for-profits do not care for the creditworthiness of students when advising towards federal direct programs. And just as the government does not discriminate in the borrower, nor did firms in the free-flowing credit atmosphere of 2008 and 2009. Financial institutions during the time advertised homeownership as the way to the “American Dream,” and for-profits today model an education as a similar step in runaway success. The notable difference here, though, can be found in the default rate comparisons of each found in figure 5 (Ip, 2015).

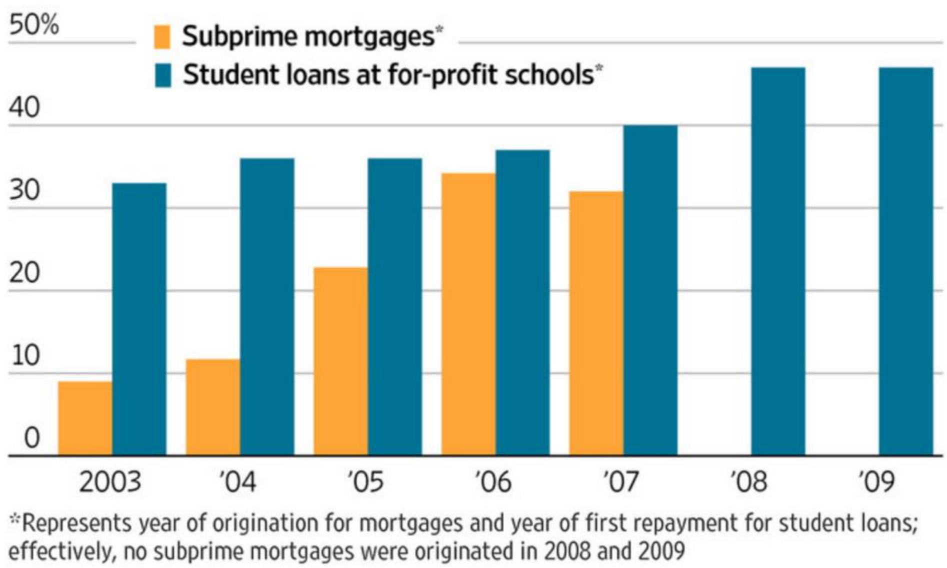

Figure 5. Defaults within the first five years for subprime mortgages versus student loans of for-profit college attendees (Wall Street Journal, 2015)

All in all, during the mortgage crisis, the government at least ruled that mortgages could not exceed the value of the home. Maybe the value of a for-profit education should have been taken into consideration during the boom of these institutions (unfortunately, calculating the value is easier said than done).

On the bright side, increased oversight and regulation has improved the for-profit sector in recent years. Today, the government has begun “requiring them to prove that, on average, students’ loan payments amount to less than eight per cent of their annual income. Schools that fail this test four years in a row will have their access to federal loans cut off, which would effectively put them out of business" (Surowiecki, 2015). In the past few years, the number of borrowers has decreased, and for-profit default rates have somewhat improved. The trade-off in regulation, however beneficial to the debt program overall, does have important effects on the traditional for-profit attendee. Many students at for-profits are older, part-time individuals returning to school to earn a degree. These individuals returning to school to better themselves are obviously a huge part of the target audience of the federal loan program. Thus, if the government is going to tighten the reigns on for-profits, something must give to help these students in other respects (such as through increased funding towards community colleges or public institutions).

Potential Solutions

Now that a vast overview of the student debt market has been documented, the most significant part of this debate must be examined – solutions. By far the most frustrating part of the American political landscape today remains the constant finger pointing and grumbling without delivering viable solutions. In all the research conducted in this report, dozens of reporters, politicians, and journalists have proposed protests on education and student debt, but no reform. For example, one 2016 presidential candidate went as far as to say that when it comes to education on an international level, "We're twenty-sixth in the world. Twenty-five countries are better than us at education. And some of them are like third world countries. But we're becoming a third world country." For the record, this cannot be even remotely verified by any valid news or research source. This candidate also offered other such groundbreaking insights on the Department of Education: "You could cut that way, way, way down" (Thomas B. Fordham

Institute, 2015). Beyond these scintillating opinions, I would simply encourage the American citizen to be well informed on such complex and important issues, as our focus is here.

Legislative/Political Suggestions

A number of legislators, politicians, and presidential candidates have made a wide variety of suggestions. While there are hundreds of ideas and potential fixes to the student debt problem, I would like to specifically discuss the ones that appear most valid. These include the ideas and proposals from Jeb Bush, Marco Rubio, Lamar Alexander, and Mitch Daniels.

To begin, presidential hopefuls Bush and Rubio have put forth great proposals to simplify and improve the student loan crisis. Governor Bush proposes that limits be set on the federal direct loan program – allowing for a $50,000 line of credit that can be drawn upon or paid back throughout one's educational pursuit. He then states that for each increment of $10,000 borrowed, students would pay back 1% of their income for 25 years. Gov. Bush also asserts that education should be as close to the students as possible. Some initiatives for improvement here involve more real world experience through internships, certifications, etc., and also through a database listing various statistics on schools to educate individuals on their decision (unemployment rates, earnings, graduation rates, and others) (Rubin, 2016). Next, Senator Rubio echoes many of Gov. Bush's suggestions, while also adding a few of his own, such as accreditation reform and income-based repayment. Recently paying off his nearly $150,000 in student loans, Rubio contends that, "People should be allowed, through internships and work study and online courses and classroom courses and life and work experience, to be able to package all of that together into the equivalent of a degree." Through reforming how we accredit postsecondary educational institutions, more individuals can find ways to receive a degree in what should take no longer than four years (Czekalinski, 2014). Sen. Rubio also maintains that there should be expansion and education towards increasing the use of income-based repayment plans to pay back government loans (Berman, 2016). Next, Senator Lamar Alexander of Tennessee has advocated for making the student loan system much simpler. Through simplification of the FAFSA form that each individual must fill out for student aid, many more individuals will not be deterred by the current 108-question complex document (Douglas-Gabriel, 2016). Alexander has also introduced bipartisan legislation for a more basic plan for lending, in which government borrowing per each individual is capped at $30,000 per year, with a maximum of $150,000. In addition, institutions with exceptionally high costs would be able to appeal to the Department of Education for up to $15,000 more per student per year. While a little more radical approach, this may help curb the cost of tuition, and encourage schools to ease growth in costs year over year (Lorin, Sept. 2015).

Lastly, and the constituent with the most interesting potential fixes for student debt, remains former Indiana Governor and current Purdue University President, Mitch Daniels. Daniels argues for the use of a more privatized system of income-share agreements, an idea championed by Nobel Prize winning economist Milton Friedman in the 1950's. Under an income-share agreement, or ISA, students would pay for their education through a fixed percentage of their income after graduation for an allotted period of time. Typical rates are anywhere from 3 to 15 percent of income, and 5 to 20 years. Under this "debt free" system of education funding, traditionally underrepresented individuals would have access to funds, and the risk would be in the hands of the investors. Thus, if a student decided to leave school and travel the world, it would be the investor's loss, and the investor would be responsible for pricing this risk accordingly. One other more significant potential risk to this program can be found in "adverse selection", in which more talented students may decide to opt out of ISAs under the assumption their overall investment may cost less if funded through debt. Students in a stable financial position with brightly perceived futures may deem ISAs too expensive a payback method. Overall, though, through a large portfolio of individuals, this has the potential to be a highly profitable investment. One company, Lumni has already tested this system through a pool of 50 gifted students in Chile, almost doubling their expected return of 10 percent (Lumni, 2016). These practices are also appearing in the United States through companies like 13th Avenue Funding, who has piloted small groups of students as well (13th Avenue Funding, 2016). President Daniels recently began the "Back a Boiler" program at Purdue University, in which alumni can invest in students through ISAs. The program will launch its pilot junior and senior class come fall semester 2016. Being that Purdue has a reputation as a STEM major (science technology engineering and math) hub, many of its students would benefit from favorable rates and low percentages of income requested. On the other hand, the private interests would have the opportunity to offer slightly higher rates or years of payment for traditionally lower earning majors (Daniels, 2015). For example, "A senior studying mechanical engineering, one of Purdue's most popular majors, could get $15,000 in return for a commitment to pay 4.23 percent of his or her income for a bit less than eight years. Purdue estimates that the engineer would have a starting salary of about $56,000, and will be making monthly payments of $200. In that hypothetical situation, the student would eventually repay a total of $20,647." On the other hand, Purdue argues the average English major can expect $34,000 to start, thus ISA contracts may include higher percentage of income or longer terms (Cowley, 2016). All in all, ISA's seem to be a much more logical way of funding students' education – if we fund our corporations (also considered individuals) with both debt and equity, why not try the same with our aspiring young students?

Industry Experts

As a part of my thesis, I had the pleasure of speaking with two experts in the industry, much of whose interviews have helped to shape this report. First, I spoke with Mark Weadick, who managed the student loan sector for over twelve years in the Citigroup Investment Banking Division, before then going on to work for Student Loan Capital Strategies, who provide financial advisory services for the student loan sector both public and private. Next, I discussed the market with Mark Smith. Mr. Smith heads the specialty-lending department at SunTrust Robinson Humphrey, which covers the bank's student loan portfolios. He has been with the bank for over twenty-five years. While I learned a vast amount from these two helpful mentors, I will focus on three key insights they had in common. First, each agreed that something must change. The increasing student debt load is simply unsustainable, and policy changes must be made to help both the federal budget and the students. Next, they suggested that this change come more from the private sector and less from the government side. Having multiple entities to share the risk of the loans – having "skin in the game" – will increase the quality of the loans made and their subsequent repayment. Increased help from colleges would also be beneficial; most importantly, schools have begun to advertise better their debt and graduation statistics to let students know what to expect. Lastly, Mr. Weadick and Mr. Smith stressed the importance of finding out how to help those that are already ensnared by loads of debt. For those who have taken out large amounts and are stuck with no form of repayment, there must be more help in place to get these Americans back on their feet. The great thing about ISA's, if implemented, would be that if all does not work out for a student, they would not be deep in a hole of debt. Overall, there will hopefully be major changes in the future to save the student debt amount from growing rapidly larger.

Personal Proposals

Through my own personal experience in delving into the world of student debt, I feel that I have a firm grasp on the overall layout of the market and current policy in place. In addition to my research, my Thesis Director, Colin Jones, and I, have developed a working financial model as a part of this thesis project. The model begins by using a Poisson distribution – which closely models the distribution of individual incomes in America – to randomly generate incomes for a pool of 1,000 individuals, based on a median income. Next, both debt portfolios and ISA portfolios were created according to the 1,000 individuals and their incomes. From there, a blended portfolio was created with the debt and ISA pools and an optimal debt/equity ratio was calculated based on the given inputs. The model can be adjusted based on different median incomes, costs of capital for both debt and ISA, portion of income shared, interest on the debt, etc. Through the model, we found that income sharing agreements were an extremely profitable venture once the income percentages reached 6 to 8 percent and above over the course of 15 years. These ISAs can be even more optimally profitable when considering a more competitive pool of applicants. For example, those from more competitive schools (possibly honors colleges within universities), higher paying majors, and better graduation rates. I would propose that the United States make ISAs a more functional funding vehicle – currently there is bipartisan legislation awaiting approval laying the groundwork for ISAs. The law lays out limits on time of repayment, portion of income, and states that ISAs would not be dischargeable in bankruptcy, like student debt currently. The law also follows what many early adopters have already been using, by limiting repayments only to years where an individual makes $18,000 or more. Once a groundwork like this has been created, ISAs will be much easier to write up from a legal standpoint.

By using a blend of both debt and equity – like many investments use – students would be able to pay smaller fixed payments of debt that are more manageable, while also paying an equity portion of one's salary during successful years. Thus, investors would be able to hedge some risk and receive above average returns in the most successful students. I would argue that the government should develop a "one size fits all" type of ISA agreement or debt/equity blend, and private companies develop their own more competitive ISAs or blends. Through the private versions, students would be able to receive more favorable rates based on thorough credit analysis looking at the individual's history, proposed university, major, and other significant factors. This would encourage individuals to choose better, more affordable schools, and in turn encourage schools to improve their graduation and debt rates. In addition, through this system, losses can be diversified away due to the law of large numbers: with a pool of students large enough, losses from those that are not as successful can be made up for by the higher performing individuals. Most importantly though, the students who are less successful would no longer be burdened until death with large amounts of debt. In turn, individuals would no longer have student debt hanging over their heads, and would be free to pursue whatever career path they please regardless of future earnings potential.

Next, I would argue that the current poorer performing colleges be required to better analyze and advertise their graduation rates, earnings potential by major, and student debt statistics. Also, universities should be required to have offices of financial literacy that create a direct link between students and their loans. Financial literacy officers would be able to make it clear to students how to pay their loans, amounts, interest on the debt, and length of time they could be paying back their loans. President Daniels created an office similar to this at Purdue, and was able to lower student loan defaults to the low single-digits across campus (Daniels, 2015). In addition, before students even choose a college, the FAFSA needs to be simplified, in order for students to more easily qualify for student aid. College is meant to be as accessible and affordable for everyone as functionally possible.

Lastly, colleges must have skin in the game. Whether through incentives or punishment, universities need to pay for poor default and loan repayment rates. Through federal or state governments, funding incentives could be created for schools that make year over year improvements to their default and repayment rates. On the other hand, schools could be forced to pay a small portion of student loan payments in years that their default/nonrepayment are exceptionally high, in order to remain in the federal program. These incentives would help universities have a reason for concern about their students' success and ability to pay back their loans.

Conclusion

Thus, by understanding the roles of all the involved parties, one can consider ways in which each role can be better fit or incentivized to help make the system work better for all. Through some simple fixes (shortened FAFSA), and others more complex (government ISA program), efforts can be made to simplify and create opportunity for students, private entities, educational institutions, and the US Government.

Overall, one cannot emphasize enough the importance of this issue. Government student loan debt has tripled in the past ten years, and without making a change it's uncertain what debt levels will be another decade from now. With more and more positions requiring degrees, the best thing America can do for its constituents is to offer simple, affordable, quality postsecondary education. Most importantly though, the cost must be manageable and shared by more than just individual students and the American taxpayers. Through creating valuable synergies between students, educational institutions, the private sector, and the government, a much more efficient system can be implemented. While students are responsible, it is also America's constitutional responsibility to create opportunity for its citizens.

I would encourage you to reflect on all those you know that are affected by student debt. This may be friends, family, yourself, or even your favorite barista at the local Starbucks down the street – all of whom are struggling to mitigate sometimes-unmanageable student loans. Each individual may have a different story, but all have debt in common. Something that affects seven out of ten Americans should, and will soon be, a top priority.

As John Harvey of Forbes asserts, "Of course, one could rightly argue that no one forced them to go to college. They freely chose to extend their education beyond high-school leaving age and take on all this debt. But, it isn't as if they are taking out these loans to buy big-screen

TVs or take Caribbean cruises. They are trying to increase what economists call human capital. They want to acquire new skills, learn new ways of thinking, and to develop specializations in particular areas of study. In short, they want to better themselves. And, when they do that, we all gain." Nothing resounds more true than this idea Harvey reminds us – college education benefits more than just the student. It benefits more than the receiver of tuition, textbook manufacturers, loan servicers, or luxury off-campus housing complexes. When American citizens receive a college education, it benefits us all.

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Figures

Figure 1: Financial Model of 1000 Student Debt Portfolio Output (Top row interest rates, left column average starting salaries, middle sensitivity return on investment)

1.4%	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15
30000	-6.5%	-0.4%	5.8%	12.4%	18.9%	25.3%	32.0%	38.8%	45.4%	52.3%	58.9%	65.3%	72.2%
35000	-6.6%	-0.3%	6.0%	12.4%	18.9%	25.5%	32.2%	38.9%	45.2%	52.1%	58.7%	65.4%	71.8%
40000	-6.5%	-0.3%	5.8%	12.4%	18.9%	25.4%	32.1%	38.9%	45.5%	52.3%	58.7%	65.4%	72.1%
45000	-6.6%	-0.3%	6.0%	12.4%	19.0%	25.5%	32.1%	38.9%	45.5%	52.3%	58.9%	65.5%	72.2%
50000	-6.6%	-0.3%	6.0%	12.4%	18.8%	25.3%	32.2%	38.7%	45.5%	52.2%	58.6%	65.5%	71.9%
55000	-6.5%	-0.3%	6.0%	12.3%	18.9%	25.4%	32.2%	38.9%	45.4%	52.4%	59.0%	65.3%	72.3%
60000	-6.6%	-0.3%	6.0%	12.4%	18.8%	25.4%	32.0%	38.7%	45.3%	52.1%	58.8%	65.4%	72.3%
65000	-6.6%	-0.3%	5.9%	12.4%	18.9%	25.6%	32.0%	38.6%	45.6%	52.3%	58.9%	65.4%	72.1%
70000	-6.6%	-0.3%	6.0%	12.3%	18.9%	25.4%	32.0%	38.7%	45.3%	52.1%	58.9%	65.5%	71.7%

Figure 2: Financial Model of 1000 Student ISA Portfolio Output (Top row portion of income rates, left column average starting salaries, middle sensitivity return on investment)

37.8%	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15
30000	-51.6%	-42.3%	-32.8%	-23.7%	-14.7%	-5.3%	3.7%	12.5%	22.6%	31.8%	41.1%	50.4%	59.9%
35000	-46.2%	-35.3%	-24.3%	-13.5%	-2.5%	8.7%	19.0%	30.3%	41.4%	52.7%	64.3%	73.9%	85.0%
40000	-40.7%	-27.9%	-14.9%	-2.6%	10.9%	23.5%	36.2%	49.1%	62.3%	74.9%	87.7%	100.4%	113.3%
45000	-35.4%	-20.9%	-6.4%	8.2%	22.6%	37.9%	52.2%	66.1%	81.3%	95.8%	109.5%	125.8%	139.6%
50000	-30.7%	-14.7%	2.0%	18.3%	34.2%	50.0%	66.8%	83.5%	99.3%	115.2%	131.7%	147.7%	164.6%
55000	-25.8%	-8.2%	9.6%	27.6%	45.4%	63.7%	81.6%	99.0%	116.7%	134.4%	152.3%	171.1%	188.2%
60000	-20.7%	-1.0%	18.6%	37.7%	57.7%	76.8%	96.4%	116.3%	135.3%	155.2%	173.2%	195.2%	212.6%
65000	-15.8%	5.4%	26.8%	47.2%	68.9%	89.9%	110.8%	132.4%	153.8%	173.5%	195.2%	215.7%	237.5%
70000	-11.2%	11.5%	35.0%	57.5%	80.9%	102.9%	126.0%	148.9%	171.1%	194.8%	216.7%	239.4%	263.6%