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Risk of Recession and Debts of Millennial College Students

James J. Teal
Elizabethtown College, tealj1@etown.edu

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Risk of Recession and Debts of Millennial College Students

JJ Teal

Dr. Neuhauser

Elizabethtown College

4/20/2020

Advisor:

Department Chair:

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Introduction

The Great Recession ended only about 10 years ago from today, and the question many investors seek to answer is when the next recession will hit. In modern history, recessions or depressions have occurred every 7 to 9 years, yet the US has continued expansionary growth. Many policy makers have announced that they believe the growth will only continue in coming year. However, at the same time most polling of economists has shown that they believe some kind of recession will occur by 2021 or 2020 (Tanzi, 2019)The goal of this research is to test the hypothesis that the next recession would be associated with debts taken by graduated college students. Student loan debt has about 44 million borrowers, with the total debt owed being about $1.5 trillion (Lockert, 2019). What separates student loans for college academics is that it is extremely difficult to default on those loans, because they are held by the government.

One of the other types of loans that is extremely large in the US is the auto-loan industry, which is owed about $1.1 trillion in total, but this figure includes borrowers from all ages. What has become more commonplace in today's society is to graduate college and the immediately purchase a car. Home ownership under 35 has decreased in the past decade, and even with a recent increase this past year according to the census bureau, more people in their 20's have been purchasing cars. This paper seeks to test the coincidence of student loan debt with auto loan debt, and if these amounts are high enough to cause a future massive spike in auto loan defaults. Most of these auto loans are being financed, some by abnormally high loan rates which students are unable to identify as bad. This could be attributed to the fact that they have already compiled such massive student debt that they have a difficult time understanding the loan rate and how quickly it can compile. One trend that this paper looks to pursue is the number of trucks and

SUVs that millennial students have been purchasing as well, specifically purchases made on credit. These vehicles are often quite expensive, and this paper looks to see if the increasing trend in financed purchases of trucks and SUVs can also be correlated with student debt and how they can affect each other an increase a default on auto loans. One study that provides some background information states that their data found "A loan on a new car has a higher probability of prepayment, whereas a loan on a used car has a higher probability of default" (Argwal, 2008), and this paper will also look to see if this holds true for students holding student loan debt. In terms of behavioral economics, college age students don't always act rationally, especially in the modern age. With a lack of awareness of their situation and attempting to "fit in" with current trends, their actions can differ from the expected rational choices economics might expect.

One paper right after the housing crisis of 2008 makes this point. "Students with debt exceeding half of their salary are forced to make difficult choices and are increasingly likely to move back in with parents and postpone important life milestones such as marriage and buying their first home as a result" (Gillen, 2008). What this paper seeks to explore is the number of students that don't follow this economically sound decision making process, and instead sink themselves further into debt with auto loans.

Student Loans

The student loan debt crisis has ballooned over the past 2 decades. It has become the second largest source of US debt today, and impacts the lives about 13% of Americans directly, and millions more as a result of being family. There are several statistics about student loans that need to be acknowledged. Around 67% of high school graduates enroll in college per year, and

about 69% of those high schoolers will take out loans in order to pay for the college that they attend. A large number of these students will end up dropping out of college, with around 30% of college freshman dropping out after just one year, with a total dropout rate of 40%, but this still leaves around 40% of each graduating high school class with kids in college for multiple years ("Percentage of High School Graduates That Go to College", 2019). Even taking that into consideration, the college dropouts still had to pay for at least 1 full year of tuition. Tuition can vary from school to school, and varies drastically when comparing private versus public, and in-state versus out of state costs, but this paper will just take the average total price for a 4-year degree of $122,000, with the per year being $30,500. This includes tuition, room and board. There are a lot of underlying statistics that could be mentioned alongside this, including that around 60% of students take 6 years to complete a 4 year degree ("Average Cost of College and Tuition", 2019).

This now leaves students in a situation with a lot of debt. Some students chose degrees with high paying salaries and steady incomes, and managed to do well in college, making it affordable to hold such debt, despite it still having a large total impact on their finances. Others finish their degrees with low starting salaries, or worse, cannot find a job with the degree that they earned. A 2013 study of 61,000 students across the country by the One Wisconsin Institute found that the average amount of time it takes for students to pay off loans in the $20-40k range was 21.1 years (Hess, 2019). With around 69% of students taking out loans in order to pay for college, and the average student owing $30,000, the typical student is well within that range of debt.

There are two main types of student loans as well, federal and private. Federal loans will generally tend to have lower interest rates than private loans, but will be handled by loan servicers (Herszenhorn & Lewin, 2010). In 2010, Congress voted to cut commercial banks out of federal student loans. The prior program of federal lending had been to allow banks to have guaranteed federal subsidies to lend money to students, with the government assuming the risk of default. This allowed banks to collect on the interest without absorbing any risk. After this passed, this meant all federal government loans had to be taken directly, without the bank middleman, while banks could become private lenders, without federal guaranteed backing. The federal government then handed out contracts to student loan servicers to collect on student loans, with there being 9 such servicers, with 4 of these being for-profit businesses. These companies have somewhat equal amounts of borrowers, if you combine all 5 non-profit organizations into one.

A loan servicer is selected for you, and is not chosen by the student. The only way to get out of owing debt to a loan servicer is by refinancing your student loans with a private lender, which can take away some of your loan protections promised by the federal government, such as cancelling your debt in the case of death. The Consumer Financial Protection Bureau (CFPB) keeps track of the number of complaints per loan servicer, and it can become clear how some of these for profit companies will focus more on their profits than the wellbeing of the students. The company Great Lakes receives about 1 complaint per 4,380 borrowers, with a total of 6.7 million borrowers, meanwhile the company Navient receives about 1 complaint for per 174 borrowers, with a total of 5.4 million borrowers ("Consumer Complaint Database", n.d.). Note that as of 2018, Navient acquired Great Lakes, so only time will tell whether their numbers worsen or Navient's improve, but prior to that date, it can show a stark difference in how for-profit

companies can treat their borrowers. On the whole, for-profit loan servicers overwhelmingly so have more complaints made to the CFPB.

SERVICER	TOTAL COMPLAINTS	TOTAL BORROWERS (MILLIONS)	BORROWERS PER COMPLAINT
PHEAA (FedLoan, AES)	10,222	6.85	670
Great Lakes	1,532	6.71	4,380
Nelnet	3,389	5.14	1,517
Navient	30,976	5.4	174
Not-for-Profit Servicers	885	5.41	6,112

Figure 1

Navient in particular has a number of horror stories associated with it. The customer service members have reportedly been asked by management to keep their calls to 7 minutes and under to increase the amount of debtors dealt with per day, there have been accusations of the company purposefully damaging the credit of disabled borrowers, and one story that many complaints have related to where a borrowers was told, in layman's terms, to live in his truck and stop paying rent in order to continue his current payments ("Why Student Debt Is 'a Crisis' for Some Borrowers", 2016). One particular plan that customer service employees are asked to try and get debtors to go along with is forbearance, which is paying less or no payments for a short time, with an increased rate later. This plan can be tempting to some students in a moment of financial crisis, but in the long run will only further pigeonhole most into debt. This also allows a longer expected amount of time on the loan, all during which interest on the loan will still be built up, creating more profit. There are several lawsuits by the CFPB against Navient for

problems like these, showing that they have collected $4 Billion in interest charges (Douglas, 2017). However, these suits were filed during the Obama presidency, and the appointed head of the CFPB named by Trump, Kathy Kraninger, has effectively stopped going after predatory practices, while the suit still continues to drag on in court.

Student loan borrowers have to deal with a high amount of debt, some difficult companies that will collect on the debt, and face a long road towards being debt free. Many borrowers find themselves in a situation where they are unable to complete their loan payments on time, and will see decreased credit scores as one of the direct results. This brings about problem student borrowers can face with auto loans.

Auto Loans

Auto loans are the largest source of US debt at around $1.3 Trillion as of the end of 2019. The debts that come from purchasing vehicles can come from both new and used cars, with around 85% of new vehicles needing financing and 55% of used vehicles needing financing. These loans will be given out by banks, credit unions pay here pay here dealers, and captive dealer financers. The majority of car loans on new vehicles is done by captive dealer financers, which is just a way of saying that you are financing through the same company you bought the car from. GM financial is an example of one such company, and is the largest. Most used vehicles are done through banks and credit unions, but buy here pay here dealers are most prevalent in used cars. These dealers specifically prey on low credit score borrowers, and have entrapped many people into a cycle of debt that they cannot break out of. However, this is still a small number of borrowers in the total sum of car loans, yet these people are almost assuredly as

in bad shape or worse off than those given sub-prime lending by banks or captive dealers financers.

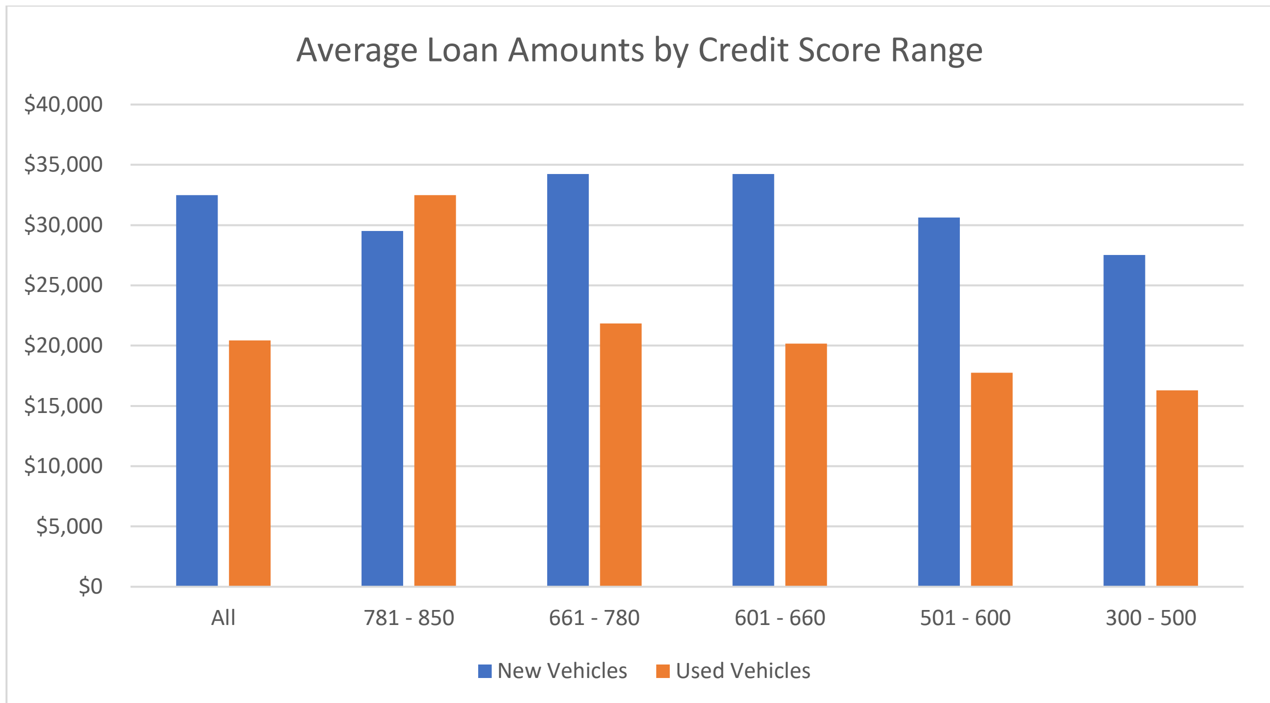


Figure 2

Sub-prime lending is the practice of lending money to someone with what is considered a low credit score, which most consider to be 620 or less. Sub-prime auto lending has remained steady at around 20% of all auto loans made over the past 5 years, and millennials are the second largest group of buyers of new cars at 28.6%. ("Auto Loan Debt Sets Record Highs", 2019). In this figure it can be shown that although the average loan amount does decrease with lower credit scores, those in the low credit score ranges can still obtain most new vehicles. Those that decide to purchase a new car with low credit will simply have a higher interest rate, or APR. Figure 3 shows the increase on 60 month loan rates for the average borrower when it comes to financing a

new car loan. This can be especially dangerous to borrowers who don’t fully understand what that interest means, how compounded interest is calculated, and what can happen if they miss their monthly car payments.

Credit Score	Average APR
720 or higher	5.66
680-719	6.65
660-679	7.9
640-659	8.76
620-639	9.72
580-619	12.66
560-579	15.6
Less than 560	21.54
All borrowers	8.06

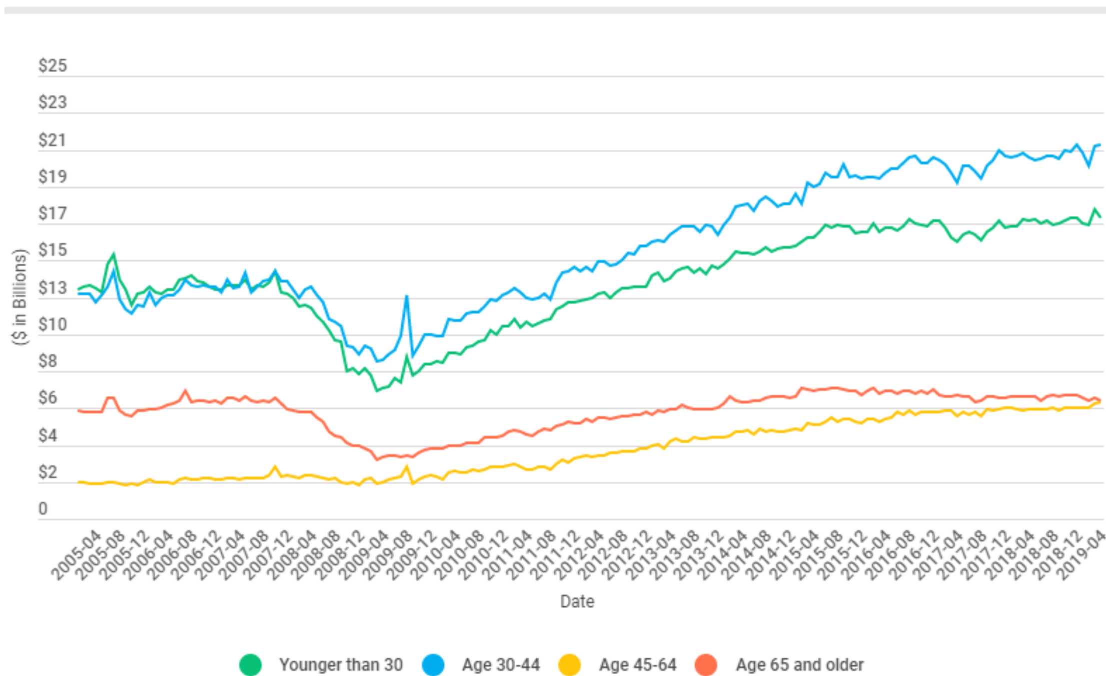
Figure 3

When observing the characteristics of the age of borrowers, there has been an increase in the average number of auto loan originations for those in the general millennial age category. Figure 4 shows these originations by groups of younger than 30 and 30-44. The age group of millennials is generally described as individuals who are between the ages of 22 and 38 as of 2019, so both of these age ranges can be regarded as generally millennials. Since 2010, there has

been a sharp increase in these originations, effectively showing that the increase in auto loans in dollars has mostly stemmed from this age group. This can imply a number of things. First, more people in those age groups have been willing to spend more money on cars than past generations were willing to, even with 2% inflation accounted for.

Auto loan monthly originations by borrower age ($ Billions, seasonally adjusted)

January 2005 - April 2019



Source: Consumer Financial Protection Bureau

Figure 4

Then the question arises, have car prices simply risen beyond inflation? The answer to that seems to be no, from statistics shown in Figure 5. The average consumer spends very similar amounts on cars as they did back in 2010, but the amount that they spend specifically on trucks has risen with inflation to create a significant gap in the amount of money needed to be spent on trucks in comparison to other vehicles. Meanwhile, according to the U.S. Department of

Transportation, the numbers from 2001 and 2017 show that the average household had 1.88 cars (Wagner, 2019), and that number has remained relatively constant, meaning that the number of households with cars has not increased significantly.

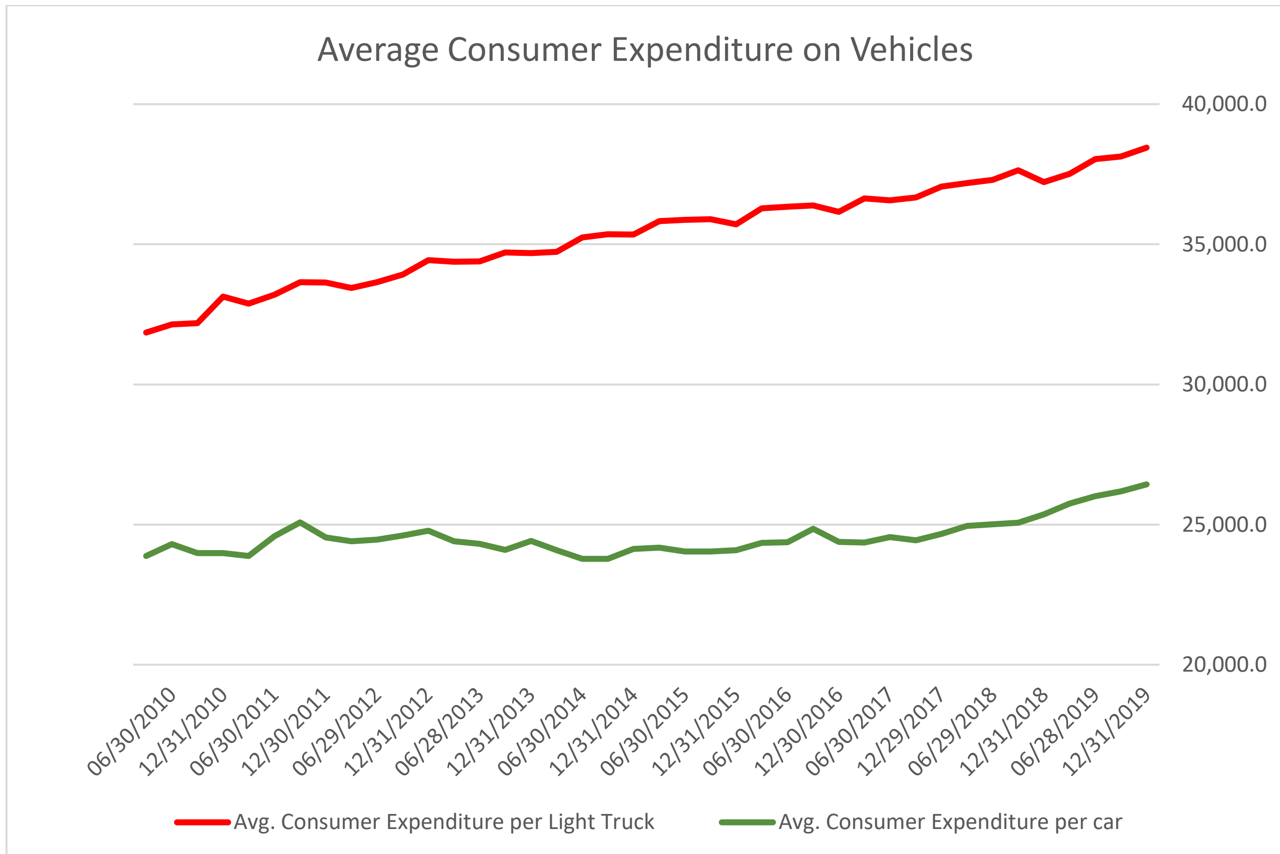


Figure 5

This is where things start to become very interesting. This paper has now shown some statistics about auto loan debt and where it comes from, and now has shown that consumers are spending more money on cars through auto loans, are spending more money on trucks, and that millennials in particular are a large group of the buyers. Light truck sales in unit sales have also increased since 2010, more so than other light vehicles in the past 5 years in particular, as shown in Figure 6.

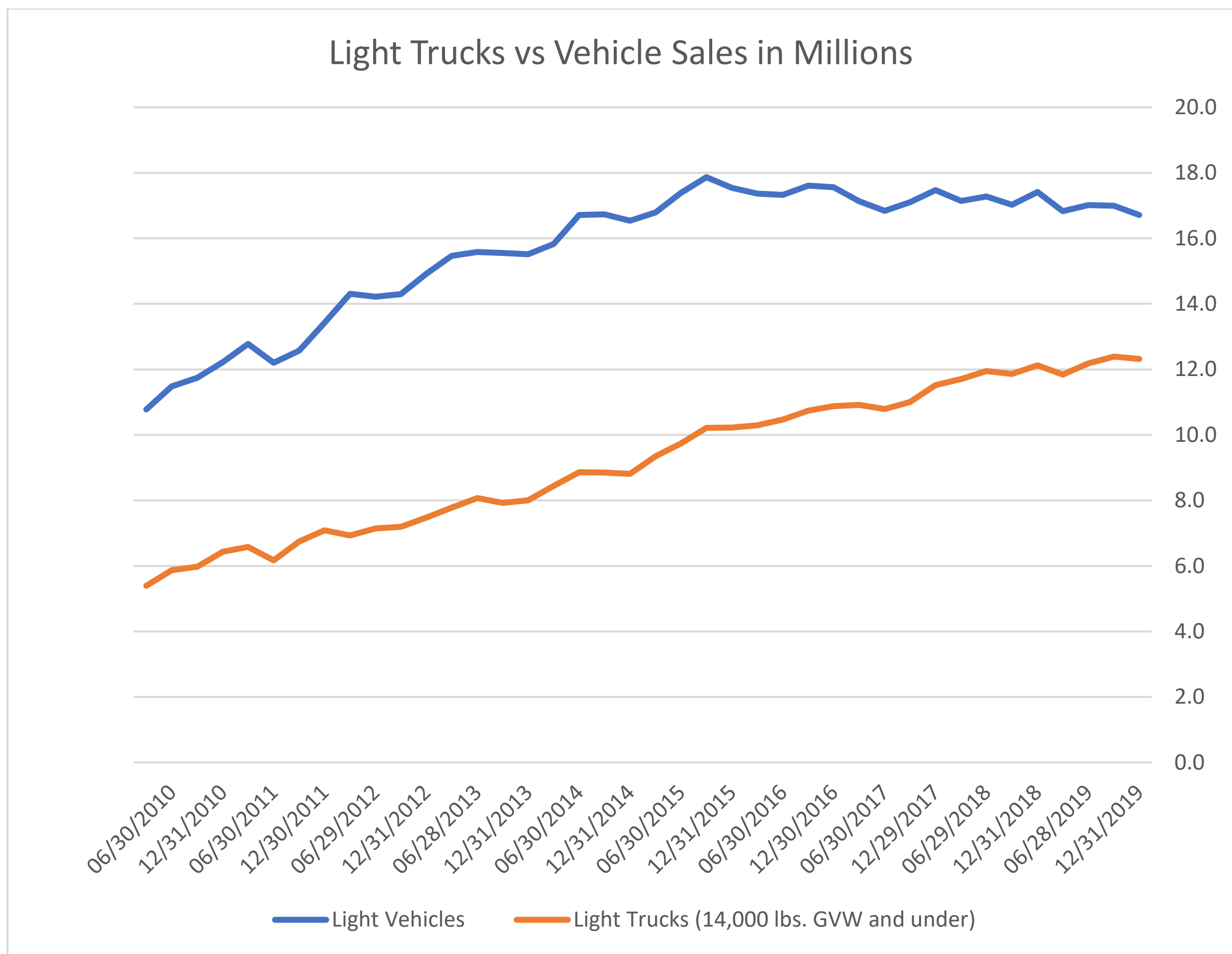


Figure 6

This paper also pointed to the prevalence of sub-prime lending in the auto loan market. As borrowers are taking out more money to afford new vehicles, especially more light trucks, about 20% of these borrowers have low credit scores and are taking out these loans at rates around 10% and upwards. A large number of these borrowers are now millennials, and as stated in the student loans subsection, borrowers in this age group have a higher possibility to have lower credit scores due to already having student loan debt on their shoulders. Not only do these borrowers have student debt loans, they will also have auto loans so that they can get themselves to and from their jobs. Rationally thinking however, one would expect students to simply not

finance a brand new car, and instead purchase a used car, even if they have to finance the car. This would lead to a lower overall debt situation, with lower monthly payments and an overall more affordable situation. However, many borrowers don't fully understand debt and how it works, and college age borrowers can be very willing to put themselves further into debt. In a lot of their minds, they already have tens of thousands of dollars of college debt, so what could be the problem in getting that brand new truck? The expectation of many is that a college student, especially graduates, can understand debt and would make rational purchases. Contrary to that belief, it is impossible for someone to be rational if they don't understand the subject matter, and are therefore what this paper would call financially illiterate.

Financial Literacy

Financial literacy is an important part of being capable of fiscal responsibility. If a debt borrower can't understand the simple principles like compounding interest, stocks, mutual funds, and inflation, then that borrower is more likely to put themselves in a debt situation that they can't effectively pay off. To measure financial literacy isn't very easy, but having a very basic idea of it can be measured with some survey questions. There was one full study administered with financial literacy being the central focus in 2019, and a survey with financial literacy questions included among other things in 2017. The 2019 study had around 1,000 respondents but was only focused on one particular college, while the 2017 survey was conducted on around 270 students from 65 different institutions. The results of both the survey and the study found that generally, students had low levels of financial literacy.

> "To assess financial knowledge, students were asked six questions about a range of financial topics, from compound interest and inflation to average investment returns and take-home pay (see Appendix A for the questions and response options). Student financial knowledge average scores include only students who answered all six questions. On average, respondents answered 3.30 out of 6 questions correctly. Respondents were most likely to answer correctly the questions on interest rates (72.7% correct) and loan repayment timeframes (71.3% correct). Students were least likely to answer correctly the question about which type of investment gives the highest rate of return on average (33.2% correct). Students at four-year public institutions had the highest average scores across the six questions (3.38), followed by students at two-year institutions (3.10) and four-year private institutions (3.08)." (*Study on Collegiate Financial Wellness 2017 Key Findings Report,* 2017)

The 2019 study observed financial literacy with only 3 questions, but delved further into observing what students performed better than others when it came to their major area of study, expected salaries, estimation of future loan payments, and more. As shown in Figure 7, this study found that only about 40% of students were able to answer all 3 basic financial literacy questions that were asked.

Table 1: **Financial Literacy Across Groups of Interest**
The table presents the percentage of students who responded correctly to the all three questions (Fin.Literate) and to each question (Interest rate, Inflation, Diversification) separately within each group. Column "Diff" shows differences in means with respect to the reference group (in italics) with significance at the 1%, 5%, and 10% levels indicated by ***, **, and *, respectively. The last column reports sample size for each group.

	Fin.Literate (All 3)	Dif.	Int.Rate (Q1)	Inflation (Q2)	Diversify (Q3)	*N*
Total	39.52		87.6	67.88	53.27	1,040
Gender						
Male	56.22		92.92	79.61	66.31	466
Female	25.96	-30.26***	83.28	58.36	42.68	574
Ethnicity						
White	40.49		86.85	69.01	53.78	768
Asian	41.29	0.80	93.53	68.66	52.74	201
Hispanic	27.27	-13.22*	77.27	59.09	56.82	44
Afr. American	18.52	-21.98**	81.48	44.44	37.04	27
Year						
Freshman	41.84	6.09	85.82	72.34	55.32	141
Sophomore	44.82	9.07**	86.55	71.43	57.70	357
Junior	35.24	-0.51	88.83	65.33	49.00	349
Senior	35.75		88.60	62.69	51.30	193
College						
Business School	49.12		91.98	70.43	64.16	399
Comp. Sciences	63.64	14.51*	95.45	84.09	70.45	44
Engineering	50.00	0.88	91.43	82.86	58.57	70
Humanities	26.42	-22.71***	88.68	50.94	41.51	53
Natural Sc	29.79	-19.34***	81.70	68.09	42.13	235
Public Health	15.12	-34.01***	82.56	47.67	26.74	86
Social Sciences	43.52	-5.60	85.19	68.52	61.11	108
Other	17.78	-31.35***	80.00	62.22	35.56	45
Parents Education						
NonFirstGen	41.03		87.36	68.59	54.87	831
FirstGen	33.49	-7.54**	88.52	65.07	46.89	209
Honors						
NonHonors	36.67		86.27	67.69	51.21	619
Honors	43.71	7.03**	89.55	68.17	56.29	421

Figure 7

"[This paper] finds that financially literate students expect significantly higher starting salaries ($57,410) than their low-literacy peers ($48,596). To our best knowledge, this is the first documentation of a "financial literacy wage gap" in the form of expectations, which is not only large ($8,814), but also highly significant. This financial literacy wage gap persists across genders; $7,159 for male and $8,319 female students" (Artavanis, 2019). This study essentially finds that not only are many students graduating from college financially illiterate, but those that

are financially illiterate will earn lower salaries as well. With these financially illiterate students also being more likely to underestimate future loan payments, more of these students are likely to have problems with delinquency in their loan payments. The threat to the market comes from what can happen in the auto loan market with a high number of delinquencies.

Market Collapse and Delinquencies

To observe the potential of what could happen in the auto loan market, the 2008 financial crisis can be taken as a relevant example. The home mortgage market had spiraled out of control in total debt, and sub-prime loans were being handed out rapidly, as shown in Figure 8. What caused the collapsed was that these mortgage backed securities had a high level of default all in relatively quick fashion due to things like variable interest rates, which rapidly increased monthly payments that homeowners needed to make. Sub-prime auto loans have been set up to have similar possibilities, with options like forbearance and deferment available to borrowers. Auto loan debt has risen rapidly since 2010, but not to the high total amount of debt seen in the mortgage crisis, as seen in Figure 9. Despite this, there is still a potential for high levels of default, and current delinquency rates can be troubling.

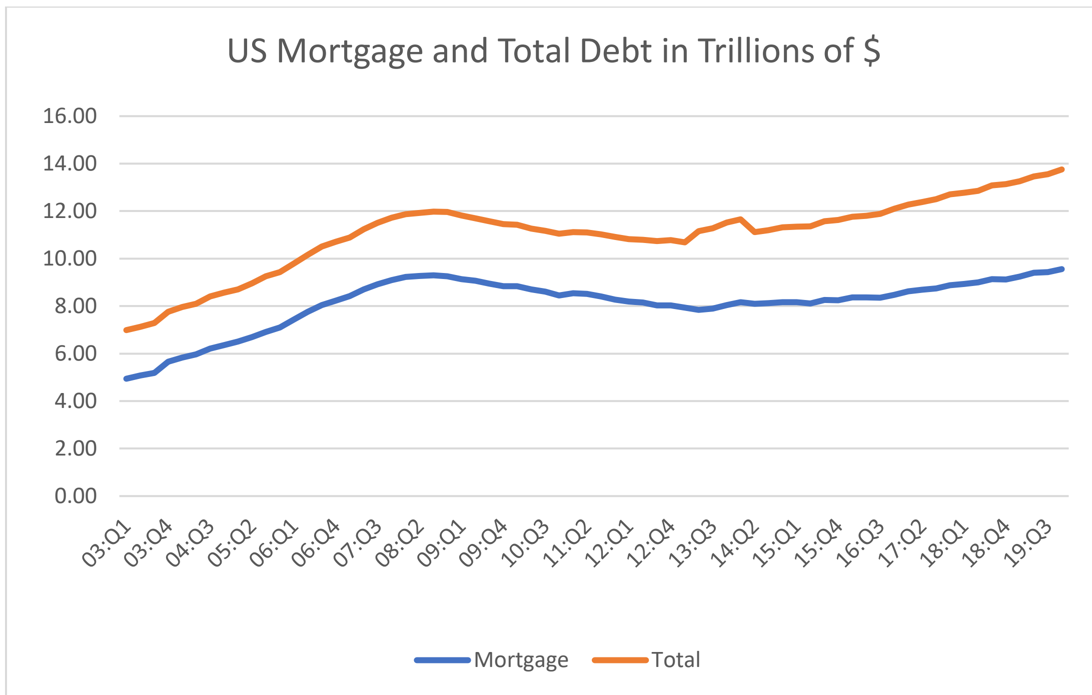


Figure 8

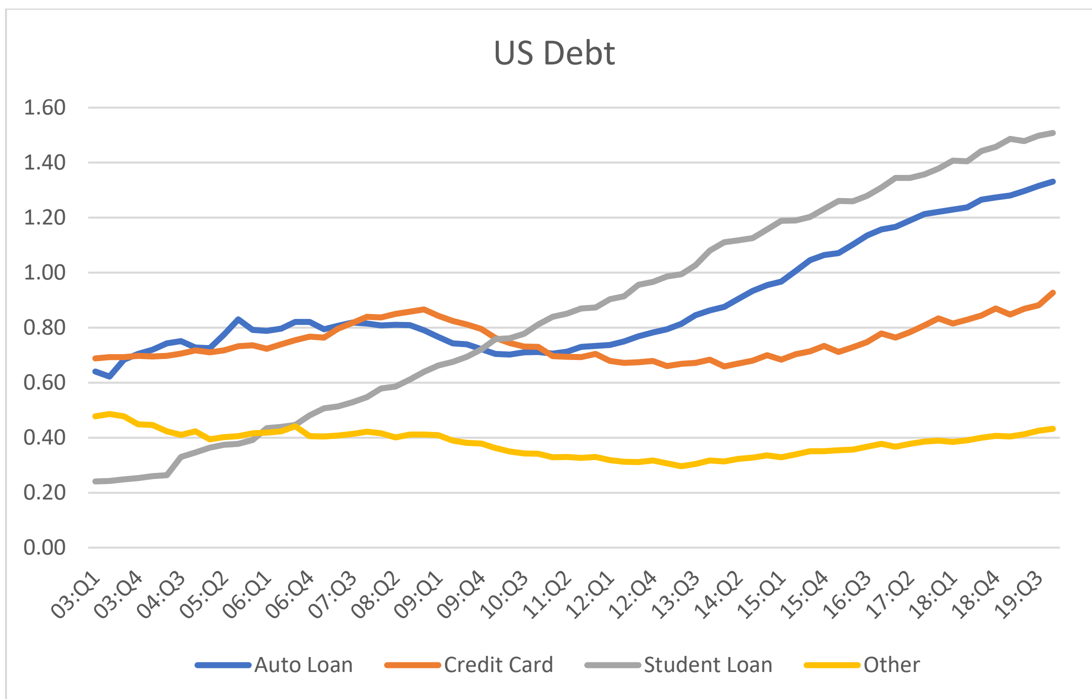


Figure 9

Figure 10 shows the number of delinquencies by major loan types. The major spike seen in mortgage loan delinquencies was the buildup to the 2008 financial crisis, and there has been a significant increase in the amount of delinquencies for student loans, with the percentage of auto loans seeing a slow rise over the last 5 years. What these student loan increases can help to show is the number of former students that are having trouble meeting their payments on time. As the amount of the loan balance has increased over this period of time significantly, this chart shows an increase in the total dollar amount of student loans turned delinquent. As auto loans have not only increased in the percentage of loan balance but also in total dollar amount, Figure 11 shows this increase in dollar amount.

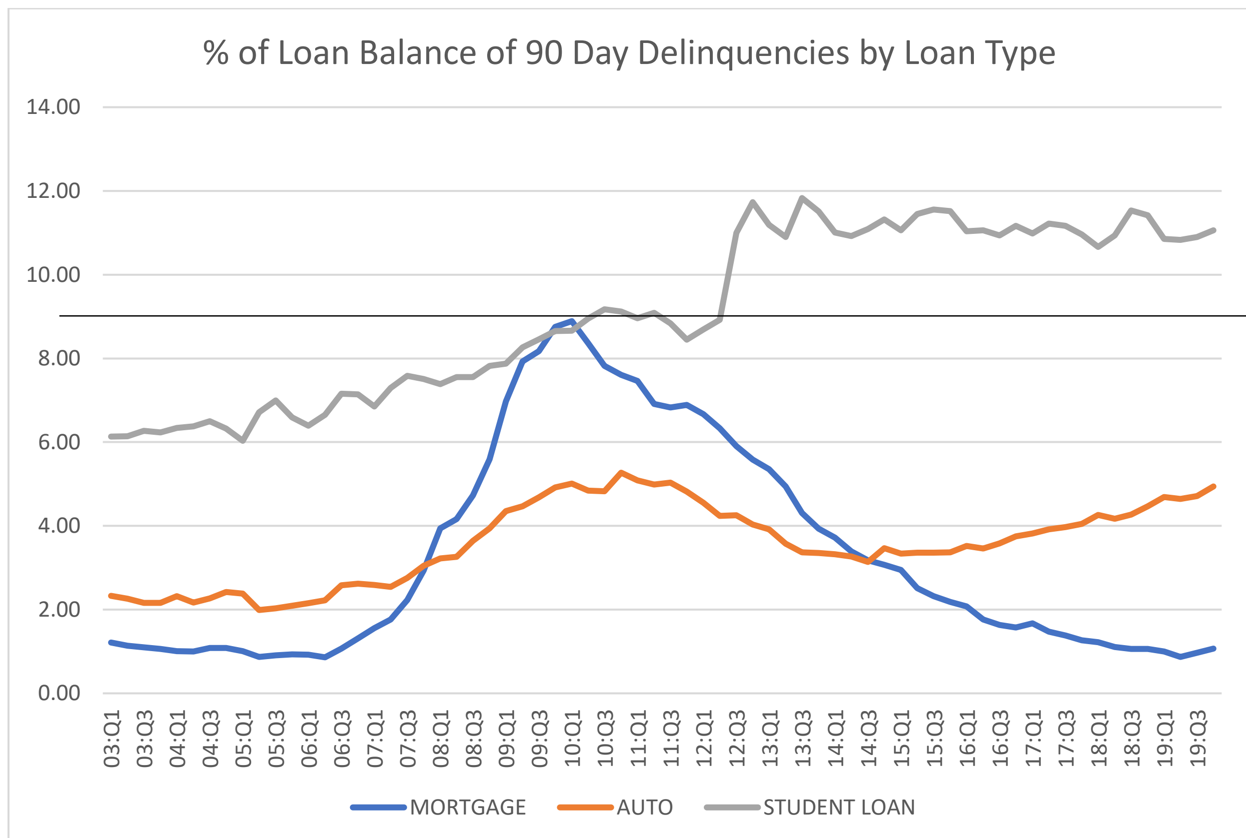


Figure 10

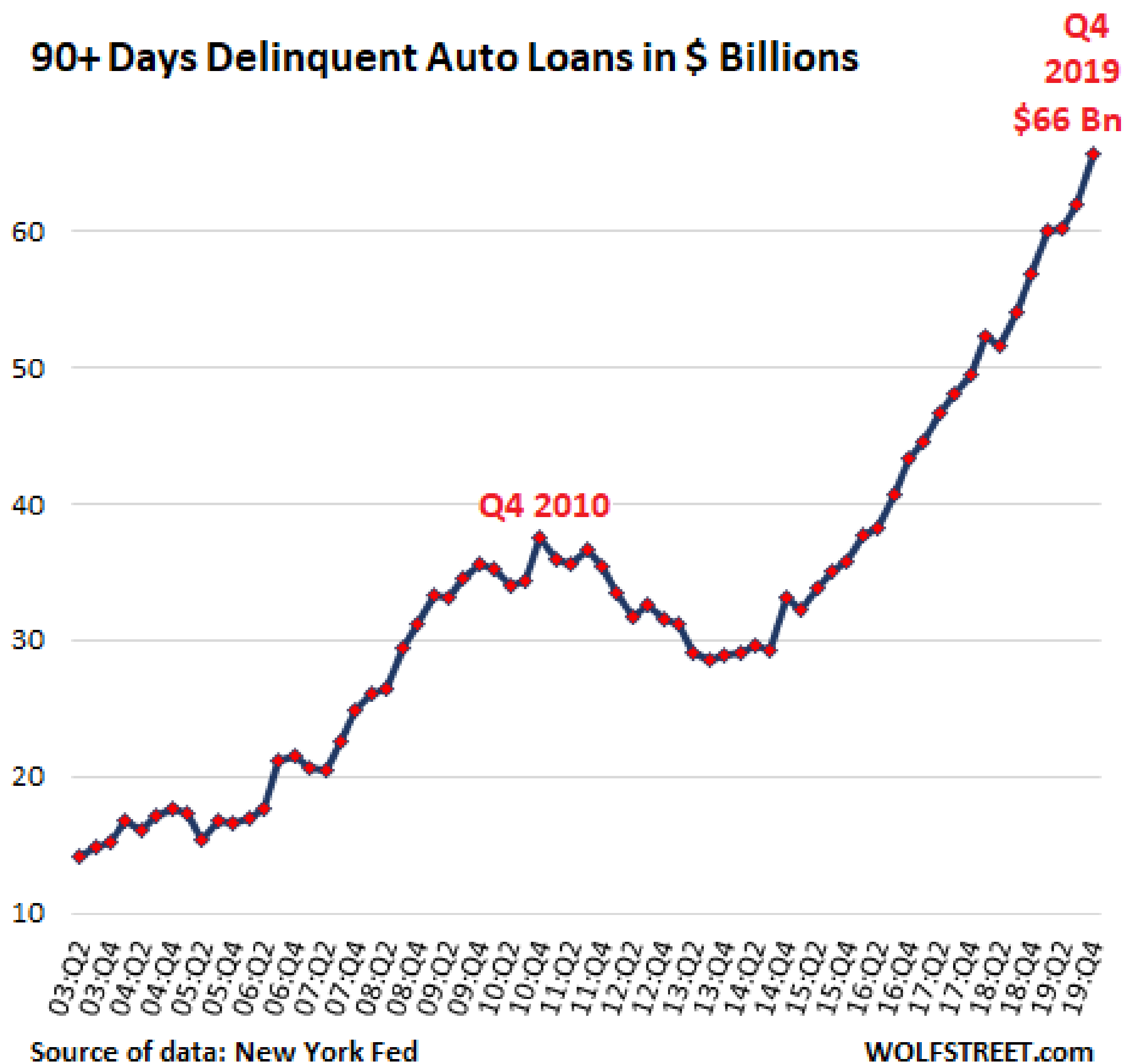


Figure 11

When delinquencies rise and more accounts go into default, the value of the asset backed securities will decrease, and those in tranches bearing higher risk will not receive their interest payments. In 2008 when foreclosures and default rates skyrocketed, the value of the mortgage backed securities in the market plummeted, and the value of the CDO's and synthetic CDO's that were made off from those original ABS either collapsed entirely or fell drastically in value. This same scenario can apply to the auto loan market, where if enough auto loans have gone into

default, the value of their securitized loans in the market will fall. The group of people that have become the most likely to default or fall into serious delinquency has become the millennials age group. This age group now faces high payments that need to be made for their college loans, on top of auto loans that the financially illiterate have created for themselves. Former student borrowers would prefer to pay off their auto loans over their college loans, but student loans, as stated, are nearly impossible to avoid with payments. Millennials must therefore prioritize their student debt before their auto loans, leading to more auto loan delinquency. In Figure 12, it can be shown the number of younger millennials with new serious delinquencies in auto loans hitting levels not seen since the 2008 crisis. The value of asset backed securities in the auto loan industry faces the possibility of massive devaluation in the near future.

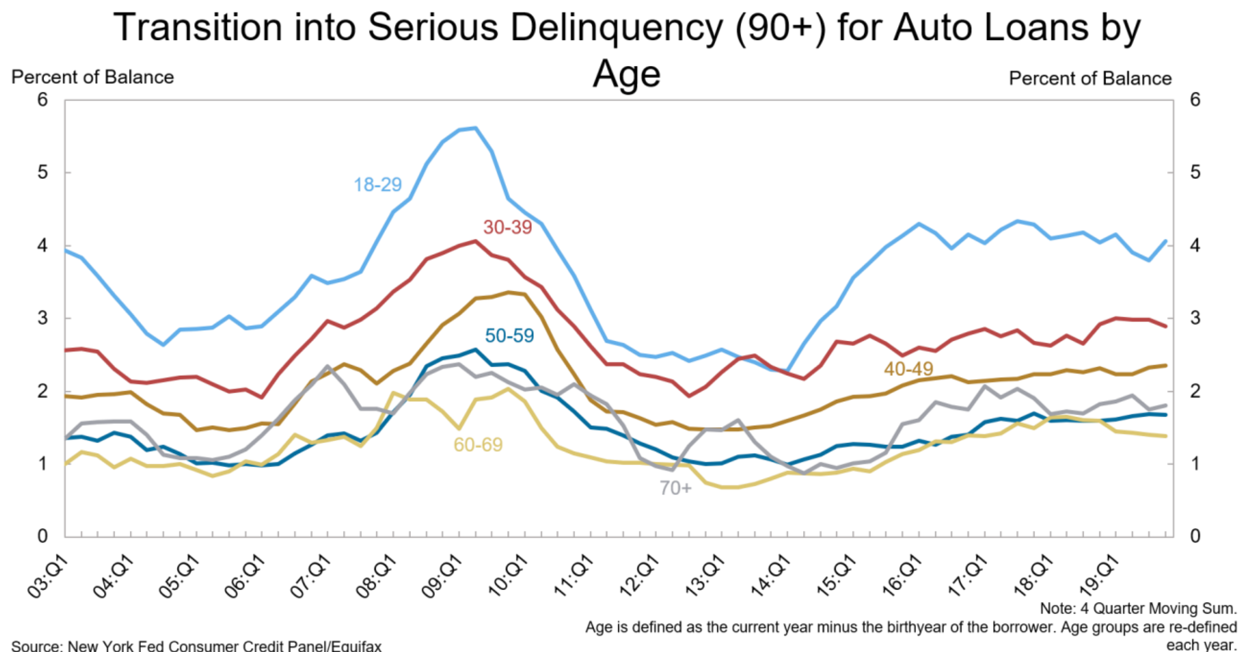


Figure 12

COVID-19 Impact

In regards to student loans, on March 27, 2020, the president signed the CARES Act into law. This new law accomplished many things related to the coronavirus pandemic, but specifically for federal student loans payments have been suspended through September 30th, 2020. This includes all accrued interest during this period of time as well. However, this does not apply to private student loans. While many private student loan lenders have been willing to pause payments for periods up to 12 months, the majority of these lenders are still going to accrue interest on these loans during this paused payment period. This provides significant relief to student loan borrowers for the time being.

The auto loan market is in a much more precarious situation. Unemployment continues to rise and millions of Americans are being forced into tough financial situations, and money will continue to get tighter as statewide quarantine’s stay in effect. No data had been released yet regarding auto loan delinquencies during this current period, but the stay at home order creates a question over whether borrowers will prioritize paying their car loan payments over things like rent and food. Rational expectations would see car loans being put on the backburner first, which would create an unexpected shock to the ABS market of auto loans. This paper has outlined the millions of Americans already in a dire situation when it came to delinquency on auto loans, and the possible shockwave that could occur as a result of this pandemic could cause a collapse in the loan market, rather than the effects of student loans. The original securitized auto loans were created to sustain some reasonable levels of default, but this type of shock would be too much and could cause an entire collapse of these securities. “For subprime lenders, a market dominated by non-bank institutions, the biggest problem is liquidity, said Amy Martin, senior director at

S&P Global Ratings. “Right now it is very difficult to access capital markets,” she said. “ABS markets are pretty much closed” (Nauman, 2020). Some companies have been offering forbearance during this time, but it still won’t solve the overall issue of a lack of income for many of these auto loan borrowers.

Conclusion

The current situation lends credence to believe that student loans will not be the ultimate downfall to the auto loan market, but instead the coronavirus. If the auto loan market collapses, it will only worsen the effects of student loans on borrowers. Lower credit scores will not allow student loan borrowers to refinance their loans at lower rates, and with still predatory student loan collection companies out there, the millennial generation will experience a debt crisis worse than anything imaginable. The stimulus package create by the federal government will need to take effect quickly and strongly in order to stop the worst possible outcome from occurring, but even if it does, former college students are in bad shape financially. Student debt is still higher than ever, and with low credit scores likely to be faced in the future, a worse recession than the current market could be coming within the next year.

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