THE IMPACT OF STUDENT DEBT ON THE ABILITY TO BUY A HOUSE

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Executive Summary

his year, total student debt held by Americans passed \$1 trillion.¹ The two-thirds of four-year college graduates who borrow to pay for college leave with an average of \$25,000 in loans² - adding to the nearly 40 million Americans already holding educational debt.³ And while college graduates are generally better off than their non-college peers, the drag of monthly payments threatens to make many of them worse off than previous generations of graduates. But while taking on ever-greater student loans surely affects big-ticket purchases that fuel economic growth, this impact is not fully understood.

The average borrower with a bachelor's degree leaves school with a large, but manageable amount of debt, a burden that typically pays off in the long-run. But unforeseen circumstances – periods of un- or underemployment, bad loan terms, failure to finish a degree program, abnormally high debt loads – can lead to true financial struggle. Swelling debt payments mean that all borrowers have less money to spend for years after graduation. High monthly loan bills can delay, downsize, or cut off purchases completely.

As one respondent to a January 2012 online survey on student debt put it, "I dread that I will probably never own a home, can't pay for a car, or buy an engagement ring for the one I love."

The problem is not merely anecdotal. Several surveys suggest individuals with loans are less likely to buy a house or start a business, but few provide the numerical analysis behind those decisions. For example, a recent study from Rutgers University found that 40% of students graduating from four-year program with debt have delayed a major purchase, such as a home or a car.⁵ But there is little information to date as to how those decisions bear out over the course of loan repayment, and how those limitations can impact the broader economy.

Presumably, these affects can be quite large. There has been a 46% increase in average debt held at graduation from 2000 to 2010,6 but salaries for college graduates have failed to keep up thereby increasing the share of a typical graduate's income going to debt. Moreover, total outstanding debt held by the public has skyrocketed 511% over the past decade.⁷

This analysis takes a first step in putting real numbers to the economic consequences of student debt, tackling the consumer item with one of the largest economic impacts: home purchases. As monthly student debt payments increase for college graduates, so does their struggle to qualify for a mortgage. Looking at a key factor in qualifying for a mortgage – the debt-to-income ratio – we find some disturbing results. Debtors who graduated in 2004 and start looking for a mortgage to purchase a home in the next year – the average age for home purchases is 30 - will face some difficult realities. Specifically:

- The average single student debtor is likely ineligible for the typical home mortgage due to their debt-to-income ratio.
- Including a typical mortgage and other consumer debt, the average single student debtor has a debt-to-income ratio of .49, meaning they would pay about half of their monthly income toward student loans and mortgage payments, and would not qualify for an FHA loan or many private mortgages.
- A similar typical single debtor in 2002 would have a debt-to-income ratio of .43 a 14% increase over the last decade.
- For couples looking to buy a house, it is more difficult to qualify for a home mortgage when even one of the buyers has student debt, and even harder if both buyers have student debt.

The impact of these limitations will be significant. Home purchases create jobs and spur economic growth. Cutting out a cohort of graduates who previously participated in this market will add another drag to an economy only just emerging from the Great Recession. This report seeks to illustrate the limitations that student debt can have on qualifying for homes, and as a result, the potential impact of this debt on high-impact economic activity.

Qualifying for a Mortgage: The Debt-to-Income Ratio

Typically, in order to take out a mortgage, a borrower must not already owe significant amounts of debt. Lenders understandably do not want to lend to someone who has no hope of paying back the loan, so they use a measure called the "debt-to-income ratio," or DTI.⁸ DTI can be a deciding factor in whether a borrower will qualify for a mortgage. In order to determine how monthly student debt payments affect one's ability to purchase a home, we analyze the impact of these payments on a borrower's DTI.

These ratios are actually two separate calculations: the first is the "front-end ratio" and the second is the "back-end ratio." The Federal Housing Administration sets a guideline at 29/41.⁹ Private lenders, however, can have their own "rules of thumb" that vary, cutting off eligibility at the back-end closer to 36%, ¹⁰ or even up to 40 or 45%. ¹¹

The front-end ratio refers to how much home-buyers spend on housing divided by their total income. The total housing spending includes the monthly mortgage payment, taxes, hazard insurance, mortgage insurance, and homeowners' dues. For example, a couple who spends \$850 a month on mortgage payments and other housing costs and earns \$3,000 per month in income. The DTI would be \$850/\$3,000=28.3% - within the FHA guidelines for a new home.

Housing Payment (\$850)

Monthly Income (\$3,000) = 28.3%

The back-end ratio includes not only housing payments, but the total amount of recurring debt owed by a household: payments like car loans, personal loans, student loans, and credit cards. Payments such as utilities, cell phone bills, and car insurance are not included in the numerator of this calculation. Let's say the same household above also had credit card and student loan debt, and spends \$50 on minimum credit card payments and \$300 a month on student loans. The back end ratio would now equal (\$850 + \$350)/\$3,000 = 40%.

Housing Payment (\$850) + Credit Card (\$50) +
Student Loan (\$300)

Monthly Income (\$3,000)

This couple would barely meet the FHA guidelines capping total monthly debt payments at 41% of income, and would not meet many private lender back-end ratio requirements. As student debt levels rise, so do back end ratios of young families with loans. Thus, our analysis of which households qualify for a mortgage focuses on the back-end ratio calculation.

The debt-to-income ratio is not the end of the story. Lenders may have a rule of thumb for a back-end ratio, but then look at each circumstance individually. Credit scores, for example, are a leading indicator, and many lenders require a minimum credit score. And borrowers can exceed a typical back-end ratio if they have a large down payment, a demonstrated ability to pay housing expenses, substantial cash reserves, high net-worth, evidence of acceptable credit history or limited credit use, less-than-maximum mortgage terms, funds provided by an organization, or a decrease in monthly housing expenses.¹³

Unfortunately, first-time homebuyers with student debt are often unlikely to meet these additional tests of financial health, or have the resources to pay down outside debt or increase down payments.¹⁴ Thus, while a high debt-to-income ratio does not automatically disqualify a borrower from obtaining a mortgage, it is a very strong indicator, and can be prohibitive in certain cases.

Calculating the Debt-to-Income Ratio

n order to estimate how a borrower's student debt level affects their borrowing capacity, we had to make several assumptions. First, we estimated the average minimum monthly credit card payment of 25 to 34 year-olds, based on average monthly debt carried over. We also calculated the average monthly car payment of 25 to 34 year-olds. We inserted both numbers into the numerator. He

Next, we captured the financial situation of a borrower looking to purchase a home around the age of 30

– the median age for first-time homebuyers.¹⁷ In order to make this estimation, we took the median debt levels from the class of 2003-2004, the cohort of borrowers turning 30 this year and likely to be analyzing their home buying options. We assume a standard 10-year repayment plan, with the average interest rates for loans taken out during the 4 years leading up to graduation for that cohort: 5.4 percent.

In fact, student debtors making the median salary for college graduates will struggle to qualify for the median mortgage for first-time buyers.

Finally, we compare salaries to monthly payment levels of the average first-time homebuyer price, plus the additional debt payments due. The median mortgage for a first-time homebuyer in 2008-2009 was \$135,500, with a median monthly payment at \$1,065.¹⁸ While failing to qualify for that median home price may simply push potential buyers to purchase smaller homes, it may completely price others out of the market altogether, given that so many college graduates live in and around more urban, expensive real estate markets.¹⁹

Rather than assume a single salary, our analysis varies salary and debt level to demonstrate how these two variables affects the DTI. We provide the debt-to-income ratio for someone earning a salary in the top 90th, 75th, 50th and bottom 25th and 10th of earners, looking at both households with a bachelor's degree, and single buyers with a bachelors. We then compared those salary ranges to debt levels, to determine how much debt and a potential home purchaser could hold at each salary level.

Single, Two-Debtor Households Hit Hardest

single person leaving school with the average debt will be severely limited in home purchasing capability. In fact, student debtors making the median salary for college graduates will struggle to qualify for the median mortgage for first-time buyers. Given that about one-third of homebuyers are single, and about 38 percent of first-time homebuyers are single,²⁰ this limitation has the enormous potential of cutting off options for the growing number of single homebuyers.

The chart below illustrates this struggle. Again, FHA loans generally require a DTI of .41, while private lenders can range from much lower to much higher. For example, a borrower who falls into the 50th percentile of salary (\$38,300), and has almost any debt payment at all, will struggle with his/her debt-to-income ratio. And it has become harder for a typical single first-time home buyer over the past decade. The average single debtor in 2002 with the median amount of debt would have a debt-to-income ratio of .43 compared to .49 today. A borrower with slightly higher income may qualify at some debt levels, but not others. A borrower who earns at the 75th percentile of earners (\$60,586) for college graduates of his/her age will likely be able to qualify for an FHA or non-FHA mortgage, unless he/she hold above average student debt.

Certainly, some of these potential homebuyers would not qualify for a mortgage, regardless of their loan situation. However, for a margin of borrowers, it puts them past the typical debt-to-income ratio. For the rest, it increases their ratio significantly, putting them at greater risk of rejection.

		Salary Percentile							
Debt-to-In Ratios for S Borrow	Single	Loan Percentile	No Loans 10th 25th 50th 75th 90th	90th 0.20 0.20 0.21 0.22 0.23 0.25	75th 0.27 0.28 0.31 0.33 0.35 0.35	50th 0.43 0.45 0.46 0.49 0.52 0.55	25th 0.78 0.82 0.84 0.89 0.94 1.01	10th 39.19 40.77 42.19 44.51 46.87 50.33	
\$5,000, \$54 10th \$410, \$33,600	\$9,400, \$103 25th \$20,700, \$52,500	\$16,700, \$183 50th \$38,300, \$83,200		\$24,100, \$265 75 th \$60,600, \$120,700		th	\$35,000, \$384 90th \$82,700, \$172,550		

The debt-to-income ratio for a two-debtor household also signals potential difficulty in home buying. Households for whom the head of household has a college degree but earns less than the average wage would struggle to qualify, holding a debt-to-income ratio of 43%. Only households with less than average debt for both borrowers, or who exceed the median household salary, will qualify. Even some households with two debtors holding median debt levels would struggle to qualify for some non-FHA mortgage loans.

bottom Salary percentile by annual salary for single people and households

Loan percentile by loan amount and monthly payment top

As one survey respondent from a two-debtor household stated of her and husband's financial situation upon graduation 4 years ago:

"I was unemployed and both my and my husband's student loans went into repayment simultaneously. We were down one income and found ourselves strapped with nearly \$1000 per month in loans. It was terrifying. It's two years later, we're both employed with good salaries, and we're just now getting back on our feet. We're grateful to have had an education, but never would have guessed that student loans would prevent us from being able to buy a home for a long, long time."

Debt-to-Income Ratios for Households with Two Debtors

	Salary Percentile						
		90th	75th	50th	25th	10th	
	No Loans	.09	.13	.19	0.31	0.49	
ile Eile	10th	0.10	0.15	0.21	0.33	0.53	
oan Percentile	25th	0.11	0.17	0.22	0.36	0.56	
Per	50th	0.12	0.19	0.25	0.39	0.62	
an	75th	0.13	0.21	0.27	0.43	0.68	
2	90th	0.15	0.21	0.31	0.48	0.77	

Households with only one debtor, on the other hand, will have a much easier time affording a house. In this scenario, all households with average salaries and above will qualify. However, those with the lowest 10 and 25 percentile earnings (\$33,600 and \$51,695) compared to their college graduate peers would still worry about qualifying for a mortgage.

	Salary Percentile						
		90th	75th	50th	25th	10th	
	No Loans	.09	.13	.19	.31	.49	
ıtile	10th	0.10	0.14	0.20	0.32	0.51	
rce	25th	0.10	0.15	0.21	0.33	0.53	ı
- Pe	50th	0.11	0.16	0.22	0.35	0.56	
oan Percentile	75th	0.11	0.17	0.23	0.37	0.59	
	90th	0.12	0.17	0.25	0.40	0.63	

Debt-to-Income Ratios for Households with One Debtor

Student Debt, the Housing Market, and the Economy

imiting the ability of some first-time homebuyers to qualify for mortgages will almost certainly add a drag on the economy, at a time when the housing market is attempting to crawl out of a four-year hole.

As the Great Recession highlighted, the housing market has an enormous impact on our economy as a whole. Almost 1.5 million Americans are employed in the real estate industry, not counting those in rental and leasing services, and nearly 6 million people work in the private-sector construction industry.²¹

In the first quarter of 2012, private residential investment and consumption of housing services made up 14.9% of US GDP.²² Even now, four years after the crash in the housing market, the private residential investment parties of the housing industry continues.

investment portion of the housing industry continues to lag well below its historical average of about 4.5% of GDP, standing at about 2.2%. Were it to return to historical levels, approximately 2.9 million direct jobs would be created.²³

But for many of those with the highest debt levels, they will face a long repayment slog before home ownership will become an option – if it ever does.

First-time homebuyers - the very buyers who are find-

ing themselves limited by the student debt burden - generate a broad range of economic activity. About 17% of homes purchased by first-time buyers are newly built,²⁴ spurring construction work and the consumption of raw building materials. The purchase of existing homes triggers repair work by the current owners.²⁵ Marketing, staging, appraisals, property insurance and realtor commissions generate even more economic activity.²⁶ The National Association of Home Builders estimates that spurring about 143,000 first-time home buyers creates approximately 86,000 new jobs.²⁷

Conclusion

ertainly, the failure to qualify for a home purchase does not price these borrowers out of the market forever. They can wait longer and pay down more debt. They can try and save for a larger down payment and cut down the amount of their mortgage loan. They can also look for smaller, below average homes, though their quest for those homes may be difficult, given the urban areas where college graduates tend to flock.²⁸

But for at least a time, they can be completely cut out of the market.

As one respondent to a January 2012 online survey on student debt lamented, "They now consider my loans in my debt-to-income ratio and I can't get a loan to buy a home, even though, a mortgage payment would be less than my rent."²⁹

So what can be done? For this cohort of graduates looking to buy a home, there are small but impactful steps. Some can, if they qualify, enter programs like income-based repayment, which extend the length of repayment of a loan, but limit the monthly payment to a manageable 15 percent of adjusted gross income.³⁰ Policymakers can help borrowers struggling with private lenders to find fair repayment terms that will similarly make room for other payments. But for many of those with the highest debt levels, they will face a long repayment slog before home ownership will become an option – if it ever does.

In the long-term, significant steps can be taken to limit debt levels. Policymakers who may be unmotivated by individual struggles of borrowers, or unconvinced of the extent of the problem today, would be wise to begin to view student debt in an additional light: as an encumbrance on the recovery of the housing market, and as a result, a potential hindrance to economic growth. Broad reforms that bring down the rising cost of college, better educate high-debt borrowers, keep interest rates and repayment options manageable, and ensure that students get a quality education that bring a strong return on their investment, are all goals unto themselves, but will also go a long way to ensuring that these borrowers have a chance to enter the housing market and fuel economic growth.

Appendix

Below is a breakdown of how we calculated the numbers, and an explanation of any assumptions we had to make.

Car Payments

Car payments are the average amount spent on vehicle financing vehicle loan principle reduction by 25 to 34 year olds from the 2010 Consumer Expenditure Survey. We estimate slight growth in car payments by adjusting for estimated inflation less 1%, given slow growth in nominal vehicle expenditures.

Credit Card Debt

We relied on figures from the Boston Federal Reserve's 2009 Survey of Consumer Payment Choice.³¹ We estimated a typical minimum monthly credit card payment by multiplying the average monthly carryover amount by 4%.³² Our figure will slightly overestimate credit card payments because many young adults do not carry over credit card balances and total credit card debt has decreased since 2009 (though we do not have a reliable way to estimate that reduction).

Housing

Median rent figures are calculated from the 2009 American Housing Survey.³³ We calculated the median 1st time mortgage taken out by first-time homebuyers in 2008 and 2009 as well as their median monthly mortgage payment. Given the frequent changes in housing prices we did not estimate an increase or decrease in monthly mortgage payments. There was some evidence that the typical mortgage payment increased from 2008 to 2009 so these figures may underestimate the median mortgage payment.

Salaries

These are calculated from the 2011 Current Population Survey Social and Economic Supplement. We estimated 2012 median salary figures by adjusting for inflation (using the latest Congressional Budget Office estimates) and assuming no real salary increase for college graduates in the previous two years.³⁴

Student Debt Payments

Debt level percentiles come from the 2003-04 National Postsecondary Student Aid Survey.³⁵ Nominal monthly payments are calculated based on the 4 year average interest rates of 2004 graduates with loan fees at 1.5% using the loan calculator at Finaid.org.³⁶

Footnotes

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