School Daze

Student Loan Debt Challenges Younger Homebuyers

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Author's note: This article is not an endorsement of any political argument regarding student loan debt forgiveness. It is simply intended to illustrate the impact student loan debt can have on an individual's ability to purchase a home.

Takeaway

Student loan debt could affect a household's ability to acquire home financing. It could reduce the household's ability to save, extending how long it takes to save up for a home.

Many obstacles stand in the way of homebuying, particularly for first-time buyers: historically high home-price appreciation, strong demand for homeownership amidst a limited supply of homes for sale, tightened mortgage credit availability, and now rising mortgage interest rates. But for many younger households, there's yet another obstacle: student loan debt.

A 2021 poll by the National Association of Realtors found that 60 percent of non-homeowning millennials (individuals between the ages of 26 and 41) cited student loan debt as a hurdle to purchasing a home. Two-fifths of millennial homeowners reported student loan debt delayed their home purchase by at least three years.

Risky Business

Being a credit risk to lenders can hinder homeownership. Student loan debt makes mortgage applicants more of a credit risk by increasing their back-end debt-to-income (DTI) ratio (total measure of household debt), constraining their ability to save, and lowering their credit score if they miss student loan payments.

All other conditions being the same, a higher DTI and loan-to-value (LTV) ratio and/or lower credit score may reduce an applicant's chances of receiving a mortgage loan, depending on the level of credit risk the lender deems "acceptable." If a higher-risk applicant is approved, the lender is likely to impose additional costs of borrowing, such as a mortgage insurance premium or other points and fees, to compensate for the higher risk.

Millennials entered the housing market during a particularly turbulent time in the U.S. economy. The Great Recession occurred when the oldest millennials were 26 to 28 years old, meaning a sizeable portion of them graduated from college into a weak labor market. This had two primary effects: it reduced the potential earnings of millennials who went to work, and it incentivized millennials to return to school, potentially incurring more student loan debt.

Meanwhile, tuition continues to rise, leaving millennials with more student loan debt, on average, than previous generations.

The Institute for College Access and Success reported that 52 percent of undergraduate students at four-year universities in Texas graduated with student loan debt in 2019-20, carrying an average balance of $26,273. Interest rates on student loans vary considerably depending on the first disbursement date of the loan and whether the loan is federal or private.

The monthly loan payment increases as the total debt balance and the interest rate increase (Table 1). A direct subsidized student loan had an interest rate of 4.5 percent from July 2019 to June 2020, amounting to a $273 monthly payment for borrowers carrying the average debt balance.

Impact on Borrower's Total Debt

As the monthly student loan payment increases, student loan debt consumes a larger percentage of household income (Table 2). If the loan payment doesn't increase, student loan debt as a percentage of total household in-

Table 1. Monthly Student Loan Payment by Total Student Loan Debt, Interest Rate

Total Debt	Interest Rate						
	3%	4%	4.529%	5%	6%	7%	8%
$5,000	$48	$51	$52	$53	$56	$58	$61
$10,000	$97	$101	$104	$106	$111	$116	$121
$15,000	$145	$152	$156	$159	$167	$174	$182
$20,000	$193	$202	$208	$212	$222	$232	$243
$25,000	$241	$253	$259	$265	$278	$290	$303
$26,273	**$254**	**$266**	**$273**	**$279**	**$292**	**$305**	**$319**
$30,000	$290	$304	$311	$318	$333	$348	$364
$35,000	$338	$354	$363	$371	$389	$406	$425
$40,000	$386	$405	$415	$424	$444	$464	$485
$45,000	$435	$456	$467	$477	$500	$522	$546
$50,000	$483	$506	$519	$530	$555	$581	$607

Source: Texas Real Estate Research Center at Texas A&M University

Table 2. Student Loan Debt as Percentage of Household Income

Monthly Student Loan Payment	Annual Household Income								
	$30,000	$40,000	$50,000	$60,000	$67,635	$70,000	$80,000	$90,000	$100,000
$0	0%	0%	0%	0%	0%	0%	0%	0%	0%
$50	2.0%	1.5%	1.2%	1.0%	0.9%	0.9%	0.8%	0.7%	0.6%
$100	4.0%	3.0%	2.4%	2.0%	1.8%	1.7%	1.5%	1.3%	1.2%
$150	6.0%	4.5%	3.6%	3.0%	2.7%	2.6%	2.3%	2.0%	1.8%
$200	8.0%	6.0%	4.8%	4.0%	3.5%	3.4%	3.0%	2.7%	2.4%
$250	10.0%	7.5%	6.0%	5.0%	4.4%	4.3%	3.8%	3.3%	3.0%
$273	**10.9%**	**8.2%**	**6.6%**	**5.5%**	**4.8%**	**4.7%**	**4.1%**	**3.6%**	**3.3%**
$300	12.0%	9.0%	7.2%	6.0%	5.3%	5.1%	4.5%	4.0%	3.6%
$350	14.0%	10.5%	8.4%	7.0%	6.2%	6.0%	5.3%	4.7%	4.2%
$400	16.0%	12.0%	9.6%	8.0%	7.1%	6.9%	6.0%	5.3%	4.8%
$450	18.0%	13.5%	10.8%	9.0%	8.0%	7.7%	6.8%	6.0%	5.4%
$500	20.0%	15.0%	12.0%	10.0%	8.9%	8.6%	7.5%	6.7%	6.0%
$550	22.0%	16.5%	13.2%	11.0%	9.8%	9.4%	8.3%	7.3%	6.6%
$600	24.0%	18.0%	14.4%	12.0%	10.6%	10.3%	9.0%	8.0%	7.2%

Source: Texas Real Estate Research Center at Texas A&M University

come decreases as household income increases. Student loan debt as a percentage of household income varies from 3.3 percent to 10.9 percent for the average monthly student loan payment of $273.

A household earning $60,000 annually with no student loan debt has a back-end DTI ratio of 37.9 percent (Table 3). The ratio for the same household with the average monthly student loan payment is 43.3 percent, just exceeding the maximum ceiling on qualifying ratios (43 percent) stipulated by the Dodd-Frank Act. Mortgage owners with higher back-end DTI ratios (in other words, less residual income) are more likely to have difficulty repaying mortgages should they lose their jobs, see a drop in their incomes, or incur significant costs from an unexpected financial event.

As student loan debt as a percentage of household income increases, the home price-to-income multiplier decreases (Table 4). The home price-to-income multiplier is the maximum home price affordable to a particular household. Depending on the household's income, the maximum home price affordable to a household with the average monthly student loan payment decreases by 8.3 percent to 34 percent compared with a household without student loan debt. For those earning the median income

Table 3. Back-End DTI Ratio by Annual Household Income, Monthly Student Loan Payment

Monthly Student Loan Payment	Annual Household Income								
	$30,000	$40,000	$50,000	$60,000	$67,635	$70,000	$80,000	$90,000	$100,000
$0	75.8%	56.8%	45.5%	37.9%	33.6%	32.5%	28.4%	25.3%	22.7%
$50	77.8%	58.3%	46.7%	38.9%	34.5%	33.3%	29.2%	25.9%	23.3%
$100	79.8%	59.8%	47.9%	39.9%	35.4%	34.2%	29.9%	26.6%	23.9%
$150	81.8%	61.3%	49.1%	40.9%	36.3%	35.0%	30.7%	27.3%	24.5%
$200	83.8%	62.8%	50.3%	41.9%	37.1%	35.9%	31.4%	27.9%	25.1%
$250	85.8%	64.3%	51.5%	42.9%	38.0%	36.8%	32.2%	28.6%	25.7%
$273	86.7%	65.0%	52.0%	43.3%	**38.4%**	**37.1%**	**32.5%**	**28.9%**	**26.0%**
$300	87.8%	65.8%	52.7%	43.9%	38.9%	37.6%	32.9%	29.3%	26.3%
$350	89.8%	67.3%	53.9%	44.9%	39.8%	38.5%	33.7%	29.9%	26.9%
$400	91.8%	68.8%	55.1%	45.9%	40.7%	39.3%	34.4%	30.6%	27.5%
$450	93.8%	70.3%	56.3%	46.9%	41.6%	40.2%	35.2%	31.3%	28.1%
$500	95.8%	71.8%	57.5%	47.9%	42.5%	41.0%	35.9%	31.9%	28.7%
$550	97.8%	73.3%	58.7%	48.9%	43.4%	41.9%	36.7%	32.6%	29.3%
$600	99.8%	74.8%	59.9%	49.9%	44.2%	42.8%	37.4%	33.3%	29.9%

Notes: The back-end DTI ratio represents total household debt to household income. For this analysis, total household debt includes only mortgage debt and student loan debt. The analysis assumes a 5 percent mortgage interest rate, a mortgage insurance premium of 0.5 percent, a 30-year loan term, a 95 percent LTV ratio, property taxes and insurance equal to 4 percent of home price, and a home purchase price of $217,000 (the first-quartile sales price in Texas in 2021).

Figures in red indicate the back-end DTI ratio exceeds 43 percent, the qualifying ratio imposed by the Dodd-Frank Act. While lenders may still be willing to originate loans to applicants whose back-end DTI ratio exceeds 43 percent, the applicant will likely need to present compensatory factors, such as certain amount in cash reserves and sufficient residual income.

Source: Texas Real Estate Research Center at Texas A&M University

Table 4. Relationship Between Student Loan Debt, Household Affordability

Student Loan Debt as a Percentage of Household Income	Home Price-to-Income Multiplier
0%	4.11
2.5%	3.87
5%	3.63
7.5%	3.39
10%	3.15
12.5%	2.91
15%	2.67
17.5%	2.43
20%	2.20

Note: This analysis assumes a maximum back-end DTI ratio of 43 percent, 5 percent mortgage interest rate, mortgage insurance premium of 0.5 percent, 30-year loan term, 95 percent LTV ratio, and property taxes and insurance at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

for householders aged 25 to 44 in 2020 ($67,635), the maximum home price affordable to a household with the average monthly student loan payment decreases by 12.7 percent compared with a household without student loan debt.

Households' Ability to Save

The size of a down payment on a home varies greatly by home price and LTV ratio (Table 5).

In 2021, the first-quartile sales price was $217,000. First-time buyers tend to have higher LTV ratios (usually between 90 and 100 percent, depending on the type of loan) than repeat buyers, who are generally older and further along in the labor cycle. A buyer who obtains a mortgage loan with an LTV ratio of 90 percent would need at least $21,700 in savings to afford the down payment. At an LTV ratio of 98 percent, that drops to $4,340.

Student loan debt makes it harder to save. A household's savings is a direct function of its disposable income and personal savings rate, or savings rate after taxes. Savings increases as annual income and the person's personal savings rate increase. According to the Federal Reserve Economic Data, the personal savings rate averaged 7.64 percent in 2019 for all Americans (the rate for 2021 and 2021 was positively skewed by economic impact payments). Younger households may have lower savings rates than older households, because

Table 5. Cost of Down Payment by Home Price, LTV Ratio

Home Price	Loan-to-Value Ratio				
	80%	90%	95%	96.5%	98%
$150,000	$30,000	$15,000	$7,500	$5,250	$3,000
$175,000	$35,000	$17,500	$8,750	$6,125	$3,500
$200,000	$40,000	$20,000	$10,000	$7,000	$4,000
$217,000	$43,400	$21,700	$10,850	$7,595	$4,340
$225,000	$45,000	$22,500	$11,250	$7,875	$4,500
$250,000	$50,000	$25,000	$12,500	$8,750	$5,000
$275,000	$55,000	$27,500	$13,750	$9,625	$5,500
$300,000	$60,000	$30,000	$15,000	$10,500	$6,000
$325,000	$65,000	$32,500	$16,250	$11,375	$6,500
$350,000	$70,000	$35,000	$17,500	$12,250	$7,000
$375,000	$75,000	$37,500	$18,750	$13,125	$7,500
$400,000	$80,000	$40,000	$20,000	$14,000	$8,000

Source: Texas Real Estate Research Center at Texas A&M University

Table 6. Total Monthly Savings by Annual Income, Monthly Student Loan Payment

Monthly Student Loan Payment	Annual Household Income								
	$30,000	$40,000	$50,000	$60,000	$67,635	$70,000	$80,000	$90,000	$100,000
$0	$3,000	$4,000	$5,000	$6,000	$6,764	$7,000	$8,000	$9,000	$10,000
$50	$2,400	$3,400	$4,400	$5,400	$6,164	$6,400	$7,400	$8,400	$9,400
$100	$1,800	$2,800	$3,800	$4,800	$5,564	$5,800	$6,800	$7,800	$8,800
$150	$1,200	$2,200	$3,200	$4,200	$4,964	$5,200	$6,200	$7,200	$8,200
$200	$600	$1,600	$2,600	$3,600	$4,364	$4,600	$5,600	$6,600	$7,600
$250	$0	$1,000	$2,000	$3,000	$3,764	$4,000	$5,000	$6,000	$7,000
$273	**-$276**	**$724**	**$1,724**	**$2,724**	**$3,488**	**$3,724**	**$4,724**	**$5,724**	**$6,724**
$300	**-$600**	$400	$1,400	$2,400	$3,164	$3,400	$4,400	$5,400	$6,400
$350	**-$1,200**	**-$200**	$800	$1,800	$2,564	$2,800	$3,800	$4,800	$5,800
$400	**-$1,800**	**-$800**	$200	$1,200	$1,964	$2,200	$3,200	$4,200	$5,200
$450	**-$2,400**	**-$1,400**	**-$400**	$600	$1,364	$1,600	$2,600	$3,600	$4,600
$500	**-$3,000**	**-$2,000**	**-$1,000**	$0	$764	$1,000	$2,000	$3,000	$4,000
$550	**-$3,600**	**-$2,600**	**-$1,600**	**-$600**	$164	$400	$1,400	$2,400	$3,400
$600	**-$4,200**	**-$3,200**	**-$2,200**	**-$1,200**	**-$437**	**-$200**	$800	$1,800	$2,800

Note: Negative values (highlighted in red) indicate the household does not earn sufficient income to save with its student loan debt burden. In other words, the household is incurring more debt.

Source: Texas Real Estate Research Center at Texas A&M University

Table 7. Years to Save for 5 Percent Down Payment on First-Quartile Sales Price in 2021 ($217,000)

Monthly Student Loan Payment	Annual Household Income								
	$30,000	$40,000	$50,000	$60,000	$67,635	$70,000	$80,000	$90,000	$100,000
$0	3.6	2.7	2.2	1.8	1.6	1.6	1.4	1.2	1.1
$50	4.5	3.2	2.5	2.0	1.8	1.7	1.5	1.3	1.2
$100	6.0	3.9	2.9	2.3	2.0	1.9	1.6	1.4	1.2
$150	9.0	4.9	3.4	2.6	2.2	2.1	1.8	1.5	1.3
$200	*	6.8	4.2	3.0	2.5	2.4	1.9	1.6	1.4
$250		*	5.4	3.6	2.9	2.7	2.2	1.8	1.6
$273		*****	**6.3**	**4.0**	**3.1**	**2.9**	**2.3**	**1.9**	**1.6**
$300		*	7.8	4.5	3.4	3.2	2.5	2.0	1.7
$350			*	6.0	4.2	3.9	2.9	2.3	1.9
$400			*	9.0	5.5	4.9	3.4	2.6	2.1
$450				*	8.0	6.8	4.2	3.0	2.4
$500					*	*	5.4	3.6	2.7
$550					*	*	7.8	4.5	3.2
$600							*	6.0	3.9

* Figure exceeds the assumed loan term (10 years) for student loan debt.
Source: Texas Real Estate Research Center at Texas A&M University

younger households generally have lower incomes and, therefore, less disposable income. Households anticipating a significant purchase, such as a home, in the near future may be inclined to increase their savings rate.

Assuming a savings rate of 10 percent, a household earning the median income for households aged 25 to 44 in 2020 ($67,635) would save $6,764 annually without any student loan debt (Table 6) but nearly half that—$3,488—with the average monthly student loan payment ($273). This nearly doubles the time to save for a 5 percent down payment on a $217,000 home (the first-quartile sales price in 2021) from 1.6 years to 3.1 years (Table 7).

The effect is more significant among lower-income households. Without any student loan debt, a household earning $50,000 annually could expect to save just over two years for the down payment on a $217,000 home. That increases to six years if the household carries the average student loan payment.

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