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Overview

The extents to which individuals are accessing credit and making timely payments on debt are important measures of financial inclusion and economic health in the United States, as well as in states and local communities. This paper uses a nationally representative loan-level dataset from Equifax to study consumer use and timely payment of four major loan types in Texas: mortgage, credit card, auto and student. It also looks at trends in balances, delinquent payments and credit scores over the past 15 years. Analysis finds that although there has been a decline in overall serious delinquencies since the Great Recession, recent years have seen increases in significantly late payments for car and student loans in the state. The portion of Texas' student debt that is currently at least 90 days past due is about 13.3 percent, while the total balance carried by Texas borrowers has almost tripled since 2006, adjusting for inflation. Car loans experienced increases in serious delinquency rates over the past four years, particularly in El Paso County, where the rate has nearly doubled since 2014. This report also notes that much of the improvement in the mortgage and credit card markets may come from restricted loan access for those with less-than-prime credit. Although the number of people in the Texas mortgage market overall increased, the numbers of those with near-prime or subprime credit decreased by more than 445,000 people. Further research is needed to understand how well the credit markets are striking a balance between keeping serious delinquencies low and ensuring that all consumers have an equal opportunity for inclusion in the credit economy.

Introduction

Credit access and loan delinquencies are important indicators of financial health in the United States—both for an individual's economic prosperity and for the nation as a whole. On an individual level, loans increase access to large-scale purchases such as cars, houses and higher education. They also help people meet everyday expenses or serve as a necessary buffer for unexpected costs or emergencies. An inability to access mainstream, affordable credit can lock people out of asset-building opportunities or increase their likelihood of using high-cost alternative lenders.

In the aggregate, measuring credit availability can be used as a proxy for economic inclusion—the ability of individuals, regardless of background, to participate fully in the economic life of their community and country, typically through mainstream financial institutions. The percentage of people with a credit history can provide insight into how many people have access to loans, how many do not, and how this has changed over time, such as before the Great Recession versus after it. Measuring credit availability can also shed light on macroeconomic trends. Tighter credit restrictions can limit consumer spending, which in turn can have a negative impact on growth of the country's gross domestic product (GDP).[1]

On the other hand, there can be dire consequences for debt performance when credit standards are too loose and consumers do not have the information they need to understand the risks they are taking. At a household level, borrowers can become trapped in a cycle of debt, defaulting on loans or depleting savings. On a larger scale, such situations can have drastic ramifications for the national economy, with the 2007–10 subprime mortgage crisis serving as the most recent example.[2] Studying the balance of these two concepts—credit access and debt performance—can help researchers and community leaders gauge the health and inclusivity of an important facet of the American economy.

This report provides a look at these important debt trends and debt performance across the state of Texas. A 5 percent nationally representative sample of consumer-level and loan-level data from the New York Federal Reserve Bank's Consumer Credit Panel and Equifax—one of the country's three main credit bureaus—were used for this report. This report is a follow-up to a 2018 Dallas Fed report on Dallas County and a precursor to four additional publications on credit in the Texas counties of Bexar, El Paso, Harris and Travis.[3] This series aims to provide a comprehensive view of credit access, loan volumes and delinquencies across the state.

The Credit Economy in Texas

Personal credit history, contained in a credit report, is essentially a factor that allows lenders to underwrite debt based on perceived risk. Aspects such as previous payment history (making on-time payments on other loans), credit utilization (how much debt is carried) and length of credit history all impact a lender's prediction of the likelihood of a consumer's timely repayment. Credit bureaus—Equifax, Experian, Transunion—use these factors to calculate a credit score for an individual, which lenders can use to make decisions about extending credit: to whom, at what cost and how much.

In Texas, 86.6 percent of adults age 18 and older had a credit file and credit score in the Equifax dataset as of 2017, the most recent year calculations are available.[4] This is down from 92 percent in 2006. This means that while 8 percent of adults in Texas were credit-invisible, i.e., without a scorable credit history, prior to the Great Recession in 2006, the rate climbed to nearly 13.5 percent 11 years later. Not having a credit score with one of the three credit bureaus can mean being excluded from credit access and from full participation in the mainstream economy. Across the nation, low-income consumers, as well as black and Latino consumers, are more likely to be credit-invisible, as are residents in southern states.[5] Texas has a higher rate of credit invisibility than the national average, likely due to its comparatively young and racially diverse demographics, large immigrant population, relatively high poverty rate and southern geographic location.[6],[7]

This report uses Equifax data to analyze four major types of consumer loans: credit card, auto, student and mortgage. These four types of loans make up about 95 percent of the loan volume in the state. Equifax calculates risk scores, typically known as credit scores, and groups them into four different categories: prime, near prime, subprime and deep subprime (*Table 1*). The majority of Texans with a credit report are prime borrowers, considered the least-risky type of borrower. Just under 30 percent of Texans with credit have scores below 620, considered riskier consumers.

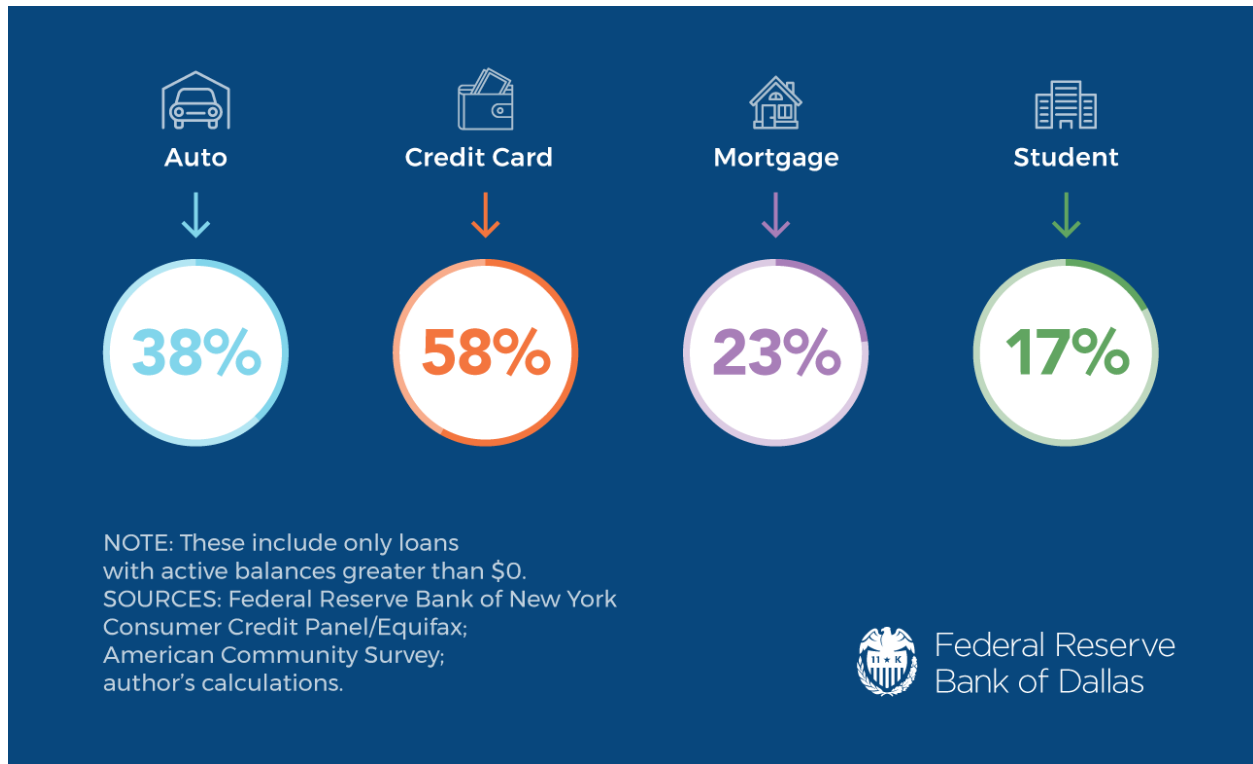## Table 1: Credit Score Categories and Texas Borrowers, 2018

Category	Credit score range	Share of Texas borrowers (percent)
Prime	680 and above	55.4
Near prime	620–679	16.0
Subprime	550–619	15.1
Deep subprime	Below 550	13.4

NOTE: Credit scores are based on Equifax Risk Score 3.0. Percentages may not add to 100 due to rounding.

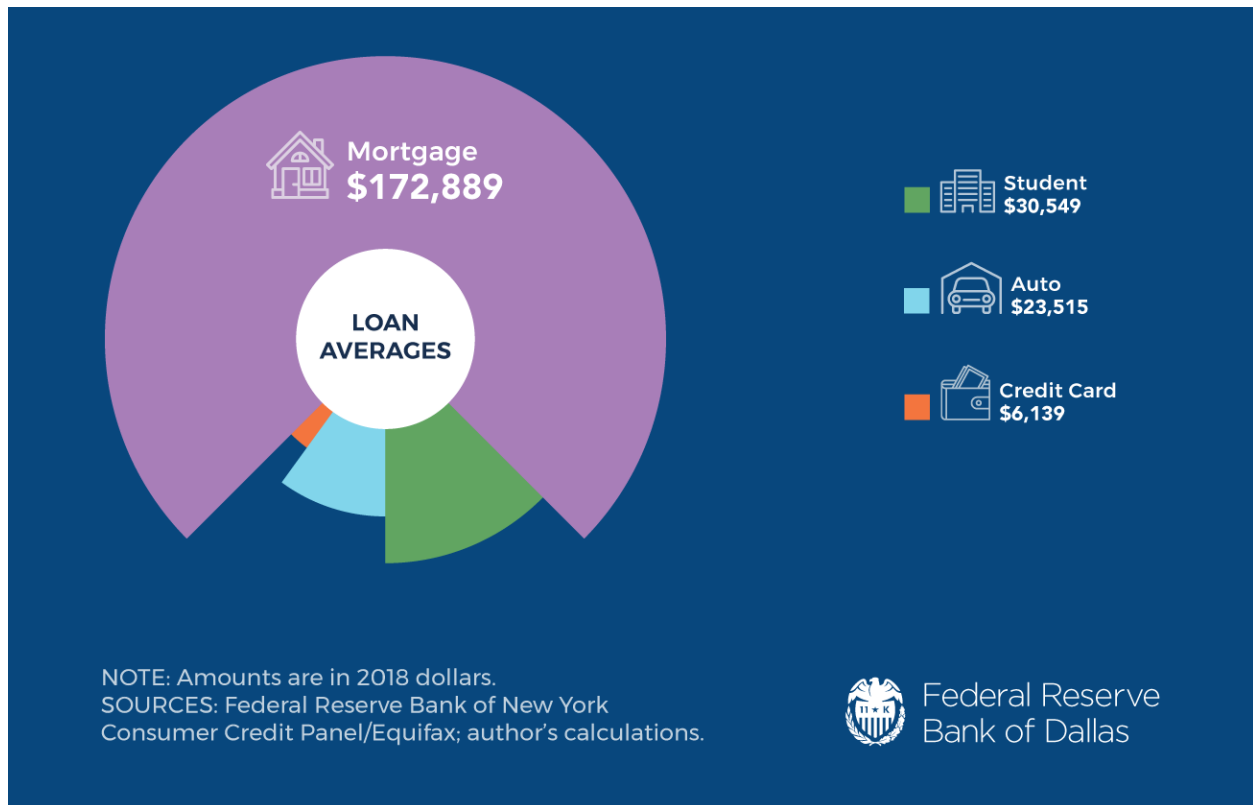SOURCES: Federal Reserve Bank of New York Consumer Credit Panel/Equifax; author's calculations.

Among the four types of loans studied in this report, credit card debt is by far the most common type of loan in Texas, with nearly 60 percent of the state's adult population carrying an active credit card balance (*Figure 1*). Nearly 40 percent have a car loan, and about a quarter of the state's adults have mortgage debt. Relatively fewer adult Texans have student loans (17 percent), but this population is growing, with less than 11 percent of adults in 2006 holding student debt. The average loan amount is on the rise too, from $21,672 in 2006 to $30,549 in 2018, adjusting for inflation (*Figure 2*).

Figure 1: Most Texans Have Credit Card Balances*

Auto **38%**   Credit Card **58%**   Mortgage **23%**   Student **17%**

NOTE: These include only loans with active balances greater than $0.
SOURCES: Federal Reserve Bank of New York Consumer Credit Panel/Equifax; American Community Survey; author's calculations.

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*Adult population, 2017.[8]

Figure 2: For Texans with Student Debt, Average Amount Exceeds $30,000

Mortgage **$172,889**

LOAN AVERAGES

Student $30,549
Auto $23,515
Credit Card $6,139

NOTE: Amounts are in 2018 dollars.
SOURCES: Federal Reserve Bank of New York Consumer Credit Panel/Equifax; author's calculations.

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This average student loan amount is more than the average car loan, which sits at about $23,515. The average balance carried for credit card holders is $6,139, and unsurprisingly, mortgage debt is the highest at $172,889 on average.

Chart 1 shows the statewide serious delinquency rate for the four types of loans starting in 2003. Loans are considered "seriously delinquent" if the debt holder is 90 or more days late on a payment. Credit cards had the highest serious delinquency rate before the Great Recession. Since then, the rate has dropped significantly, likely due in part to federal legislation passed in 2009 (see "Credit Card Debt"). Median credit card debt fell 14 percent in the past decade, while the average fell 23 percent, indicating a significant drop in large debt burdens.

Chart 1
Auto, Student Loan Serious Delinquencies on Rise in Texas
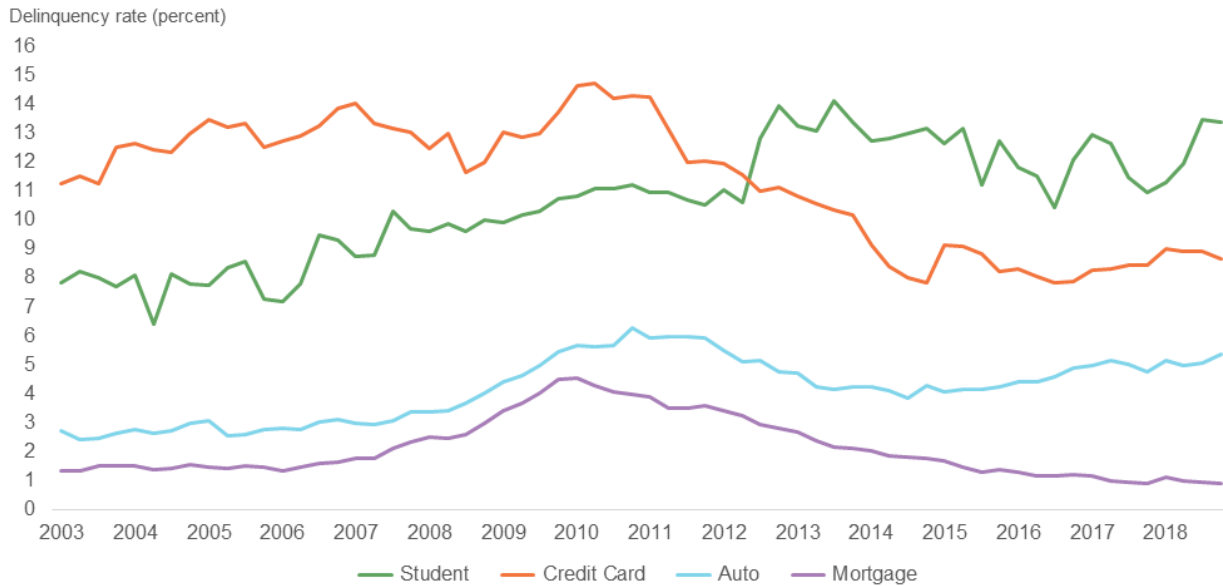
NOTE: The significant jump in serious student loan delinquencies that occurred in 2012 was due to a major servicer transferring a large number of loans to the government due to delinquency.
SOURCE: Federal Reserve Bank of New York Consumer Credit Panel/Equifax.

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The opposite is true for student loans. Student loan serious delinquency rates have been creeping steadily upward for over a decade, and median loan amounts per borrower increased 43 percent between 2006 and 2018, after adjusting for inflation. Recently, serious delinquency rates for student loans have remained high, much higher than any of the other three types of loans. Taken together, these trends have been a cause of concern for economists, community groups, borrowers and lenders. Given that a postsecondary credential generally leads to higher-paying jobs, striking a balance between access to student loans and low delinquency rates is important to preserving economic mobility in this country.[9],[10]

Serious delinquency rates for mortgage loans in Texas have always been lowest of the four, even during the Great Recession's housing crisis. For a variety of reasons, Texas fared better in the mortgage crisis relative to other states.[11] Recently, the serious delinquency rate has fallen even lower than it was before the recession. Still, the shifts between loosening and tightening lending standards that have characterized the past 16 years have had ramifications for lower-income borrowers and should be monitored (see "Mortgage Debt").

Since about 2015, the serious delinquency rate for car loans in Texas has slowly risen. Historically, the serious delinquency rate has also been relatively low in the state, with a bit of a rise during the recession before dipping back down. As of fourth quarter 2018, rates are nearing their recession peaks. Consumers often prioritize making a car loan payment above other loans, which gives cause for concern when car loan delinquencies increase.[12] In particular, this trend implies that some consumers are still struggling despite an otherwise strong economic climate.

Mortgage Debt

Mortgage delinquency rates in all counties in this study and the state of Texas were low in the early 2000s and then spiked during the Great Recession. Dallas County had the highest serious delinquency rate during the recession, reaching 5.41 percent in 2010. With the exception of El Paso County, other counties and the state as a whole have seen their serious delinquency rates fall even lower than their prerecession rates. Notably, Travis County saw a relatively small spike in delinquencies during the housing crisis and today has an especially small delinquency rate of under 0.5 percent. One potential explanation for this trend is that there is a greater share of prime borrowers in Travis County than there are in other parts of the state. Travis County also boasts higher educational attainment rates and higher median incomes, both of which tend to be correlated with better credit scores. A Travis County report on these issues will be forthcoming in 2019. Chart 2 shows the 16-year trend of mortgage delinquency rate in five of the most populous Texas counties and Texas as a whole.

Chart 2
Seriously Delinquent Mortgages Continue to Decline in Texas
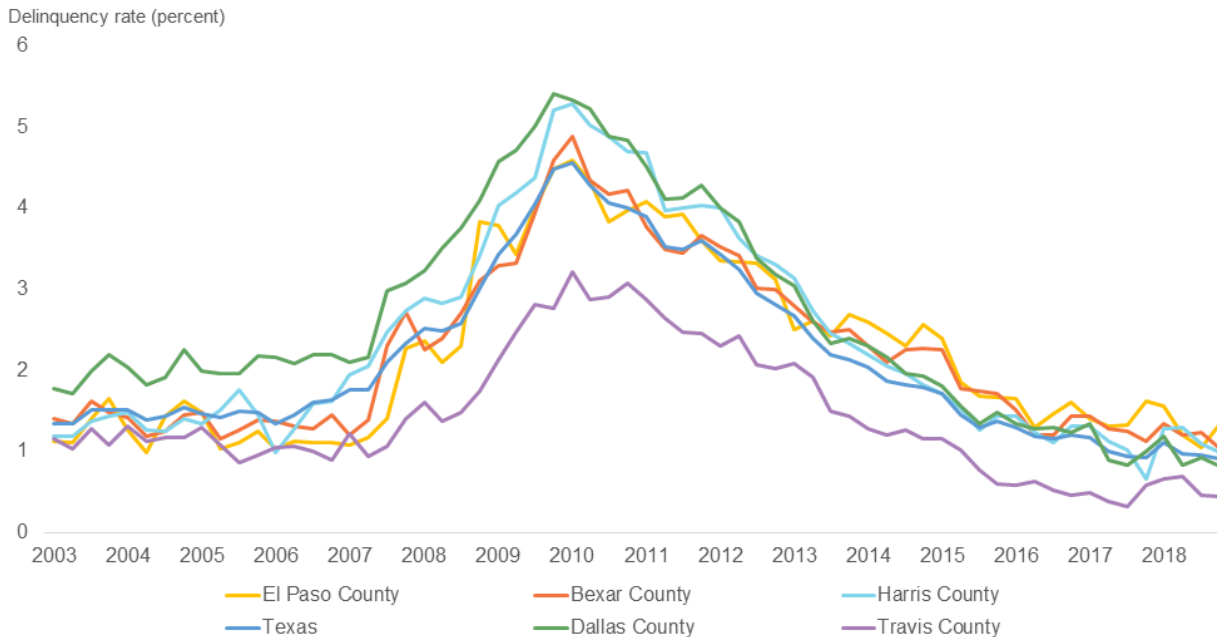
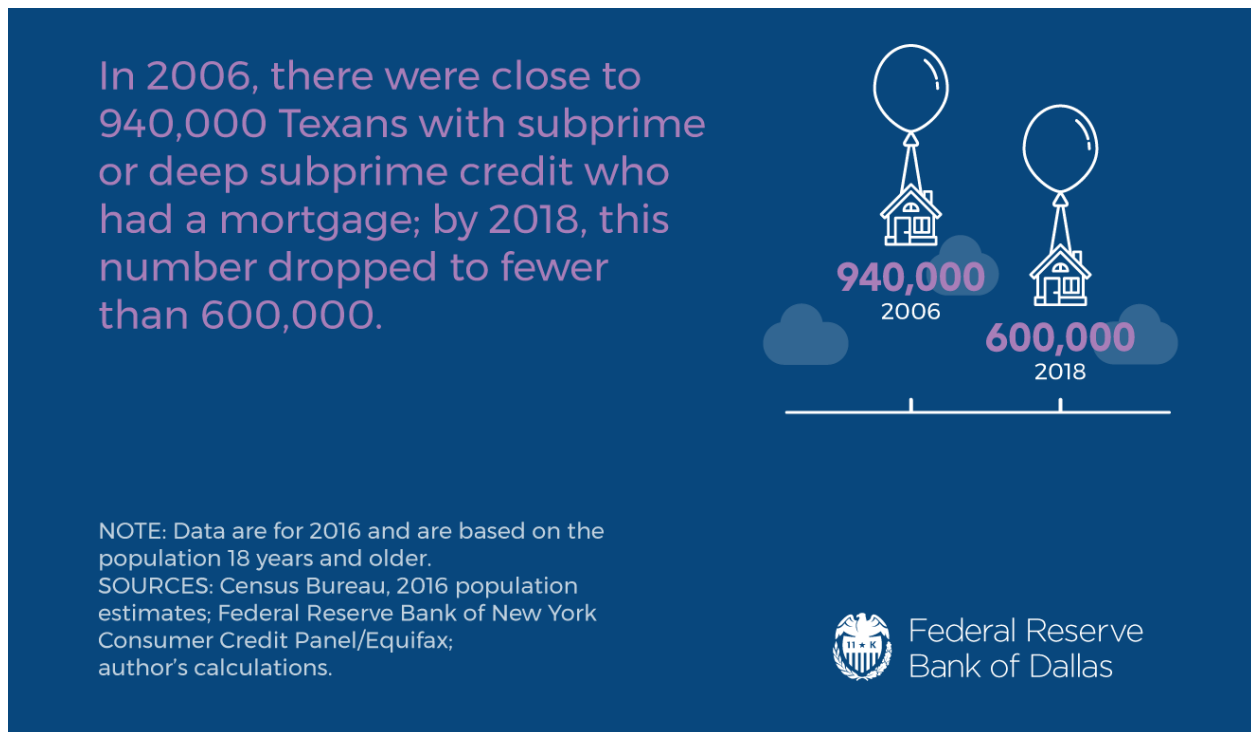Delinquency rate (percent)

SOURCE: Federal Reserve Bank of New York Consumer Credit Panel/Equifax.

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Statewide, the share of the mortgage loan volume that belongs to prime borrowers has gotten larger over time. In 2006, before the housing crisis, 67 percent of the aggregate volume belonged to prime borrowers. That figure grew to 81 percent by 2018. The median loan amount also increased from nearly $121,000 in 2006 (in 2018 dollars) to over $134,000 in 2018.

Digging deeper into the data, it appears that two phenomena are at play. First, from 2006 to 2018, the average mortgage amount increased for prime borrowers, but not for subprime borrowers. Those with prime credit appear to be accessing more expensive houses than they were 12 years ago, while their peers with lower credit scores have experienced no change. Second, in those 12 years, there has been a significant decline in the number of subprime borrowers who even have a mortgage. In 2006, there were close to 940,000 Texans with subprime or deep subprime credit who had a mortgage; by 2018, this number dropped to fewer than 600,000 (*Figure 3*). Even the number of mortgage holders with "near prime" credit—not typically considered to be very risky borrowers—decreased by 98,000 borrowers or 15 percent between 2006 and 2018. Meanwhile, the number of prime mortgage holders grew by 36 percent over the same time frame, increasing from 2.6 million borrowers to almost 3.6 million.

Figure 3: Texans with Subprime Mortgages

In 2006, there were close to 940,000 Texans with subprime or deep subprime credit who had a mortgage; by 2018, this number dropped to fewer than 600,000.

940,000
2006

600,000
2018

NOTE: Data are for 2016 and are based on the population 18 years and older.
SOURCES: Census Bureau, 2016 population estimates; Federal Reserve Bank of New York Consumer Credit Panel/Equifax; author's calculations.
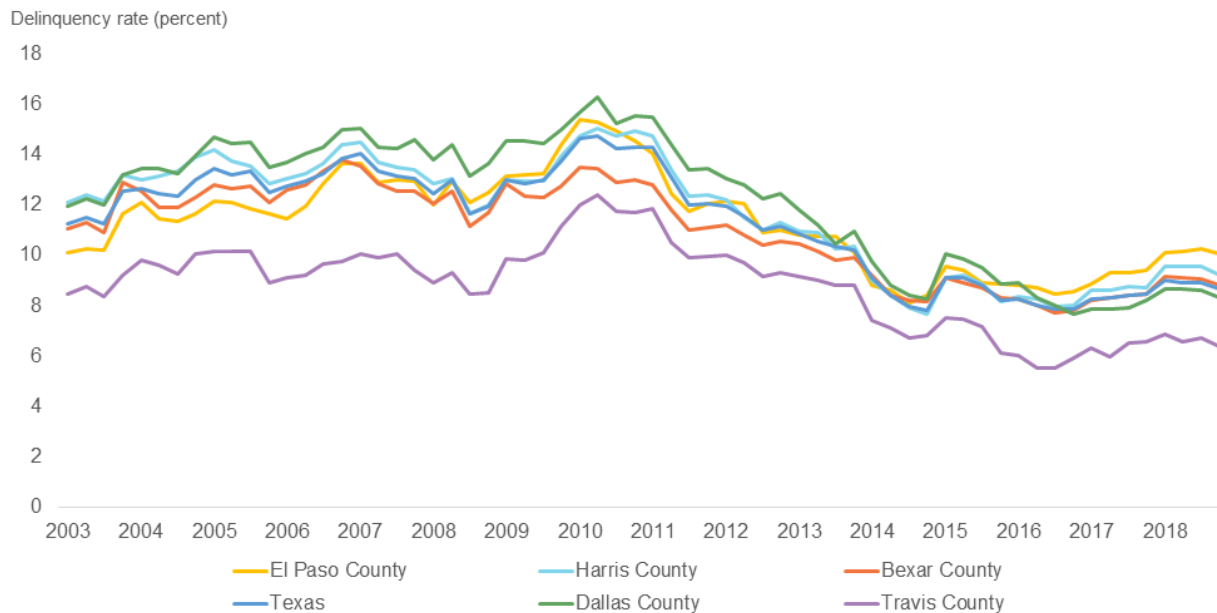
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Although the overall credit economy had been trending more toward prime credit in that time period, the impact has been a bit larger in the mortgage market, where lending standards have fluctuated post-recession, especially for subprime borrowers.[13] In 2006, prime borrowers held a 16 percent larger share of the mortgage market than they did the overall credit market. In 2018, that gap widened to 21 percent, with prime borrowers holding 55 percent of the overall market and 76 percent of the mortgage market. Is this decline in non-prime borrowers in the mortgage market a result of improving credit scores, or is it because those with non-prime credit have less access to credit than they once did? The answer is beyond the scope of this paper, but these data, taken together with the increase in the credit-invisible population, suggest that a combination of both factors is likely at play. The Dallas Fed will explore this question further in future publications on credit scores and housing.

Credit Card Debt

Credit card delinquency rates throughout the state have fallen considerably since the 2009 passage of the Credit Card Accountability, Responsibility and Disclosure (CARD) Act. This federal legislation put restrictions on the fees credit card companies could charge and limited hikes in interest rates. The CARD Act also required all companies to assess a borrower's ability to pay before granting credit. As a result, late fees and overlimit fees decreased. The Consumer Financial Protection Bureau conducted studies that also found correlations between the CARD Act and lower overall consumer credit card costs and restricted credit access for young and subprime borrowers.

As shown in Chart 3, prior to 2016, Dallas County had historically seen the highest rate of serious delinquency in credit card payments. In the last several years, this rate took a sharper decline than other counties and by 2017, it had become lower than Bexar, El Paso and Harris counties. Dallas County's share of seriously delinquent credit card loans is now the second lowest—second only to Travis County, which again stands out among the five counties in terms of relatively low delinquencies. Finally, the rise in serious credit card delinquency rates across the board since 2016 is worth investigating.

Chart 3
Small Uptick in Serious Credit Card Delinquencies After Period of Decline
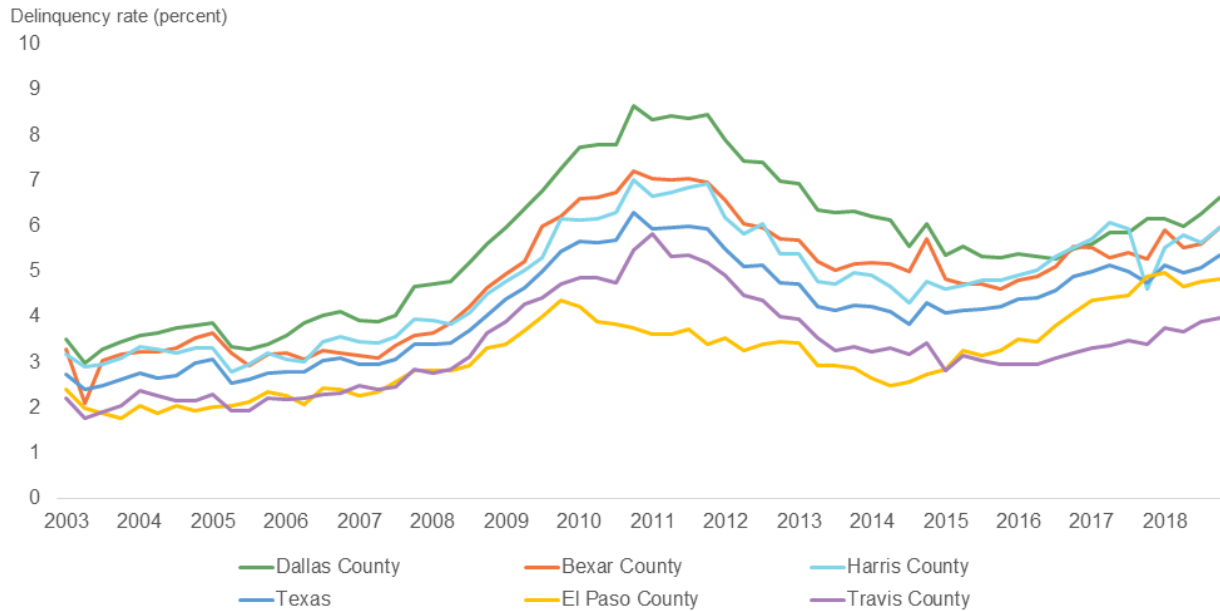
Delinquency rate (percent)

SOURCE: Federal Reserve Bank of New York Consumer Credit Panel/Equifax.

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Considering the CARD Act, it is not surprising that the credit card loan volume in Texas has decreased from $71 billion in 2006 (adjusting for inflation) to $67 billion in 2018. A greater share of that loan volume also belongs to prime borrowers—64 percent in 2018 compared with 53 percent in 2006. Again, the CARD Act likely played a role in these shifts in the market. Overall, it seems that the CARD Act has been successful in reducing fees and improving transparency for borrowers but perhaps with some unintended consequences: research has linked the act with restricted subprime access to credit cards as well as less-competitive interest rates.[14],[15]

While serious auto loan delinquency rates were relatively low in the early and mid-2000s, delinquencies have recently climbed again after a brief postrecession recovery (*Chart 4*). This trend has been seen across the country. The Federal Reserve Bank of New York observed that more consumers—from all credit backgrounds—are taking out car loans than ever before.[16] While the overall credit quality is high, the increased number of subprime borrowers in absolute terms may help explain why auto delinquencies have increased in recent years. Indeed, auto debt performance in the subprime market has deteriorated since 2015. In Texas, the subprime serious delinquency rate was at 16.7 percent at the end of 2018, swiftly approaching its 2010 recessionary peak of 18.2 percent. And yet, the economy is healthier than it was during the recession. New York Fed researchers note that in the midst of a healthier economy, this auto trend suggests "not all Americans have benefited from the strong labor market."[17]

Chart 4
Serious Auto Loan Delinquencies Growing

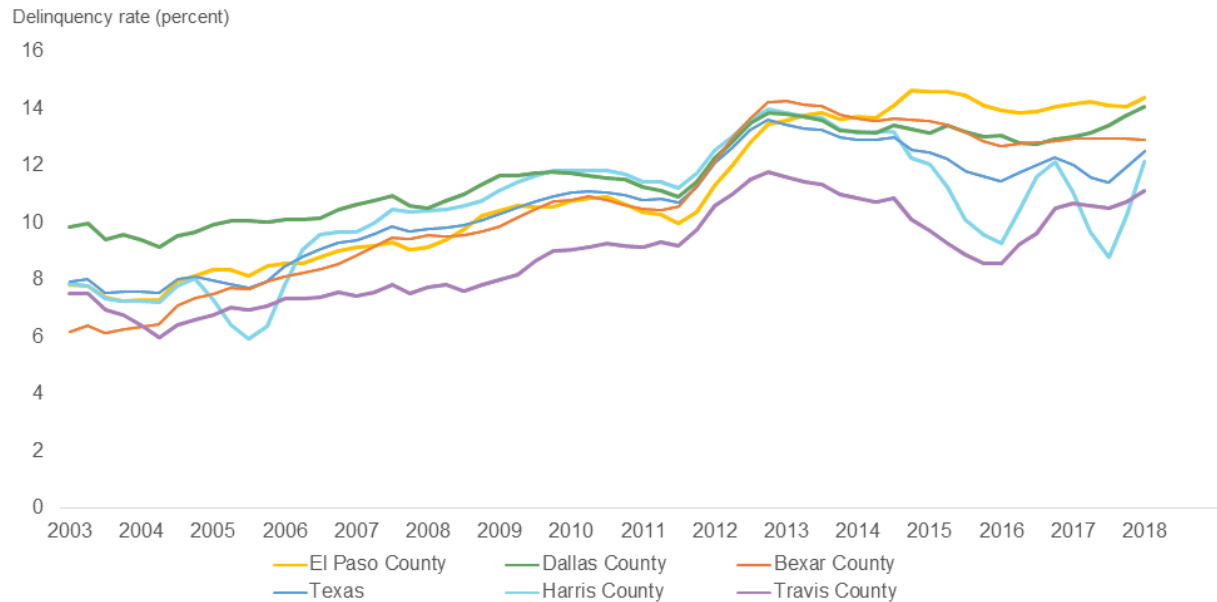SOURCE: Federal Reserve Bank of New York Consumer Credit Panel/Equifax.

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Of the Texas counties in this report, El Paso County experienced a particularly steep rise in serious auto debt delinquencies, with its rate nearly doubling from 2014 to 2018. Unlike other counties and the state at large, El Paso's serious delinquency rate is currently past its peak during the Great Recession. A few possible factors are at play. First, the average car loan carried in El Paso County is higher than the other four counties, despite El Paso's relatively low median household income. Secondly, since mid-2017, the performance of auto debt for prime borrowers in El Paso has worsened, while prime performance in other counties has remained relatively stable. However, at a rate of about 0.2 percent, serious delinquencies in the prime market are still quite rare.

Lastly, the dip in serious delinquencies in Harris County in late 2017 and early 2018 could be due to loan forgiveness efforts after Hurricane Harvey and a boost in the local economy due to the oil business recovery. Once again, some experts view car loan delinquencies as a weather vane for the economy as a whole, so further research into the recent rise in delinquency rates may be warranted.[18]

In general, student loan delinquency rates in the Equifax dataset are more volatile, due in large part to how student loans are reported and specifically how delays in the reporting can create uneven patterns.[19] Due to this volatility, data for Chart 5 are presented as a four-quarter moving average. Regardless, it is clear that student loan delinquencies have steadily been on the rise since 2003. Because of a change in reporting from one major loan servicer, there was a spike in the delinquency rate in 2012. For Harris County, trends are particularly erratic. Some of this movement is likely due to temporary disaster relief forbearance following natural disasters such as Hurricanes Rita and Harvey, during which time borrowers affected by storms did not have to make payments. Regardless of the fluctuant patterns, it is clear that serious delinquencies in student loans are generally higher than they have been, as are average borrower balances.

Chart 5
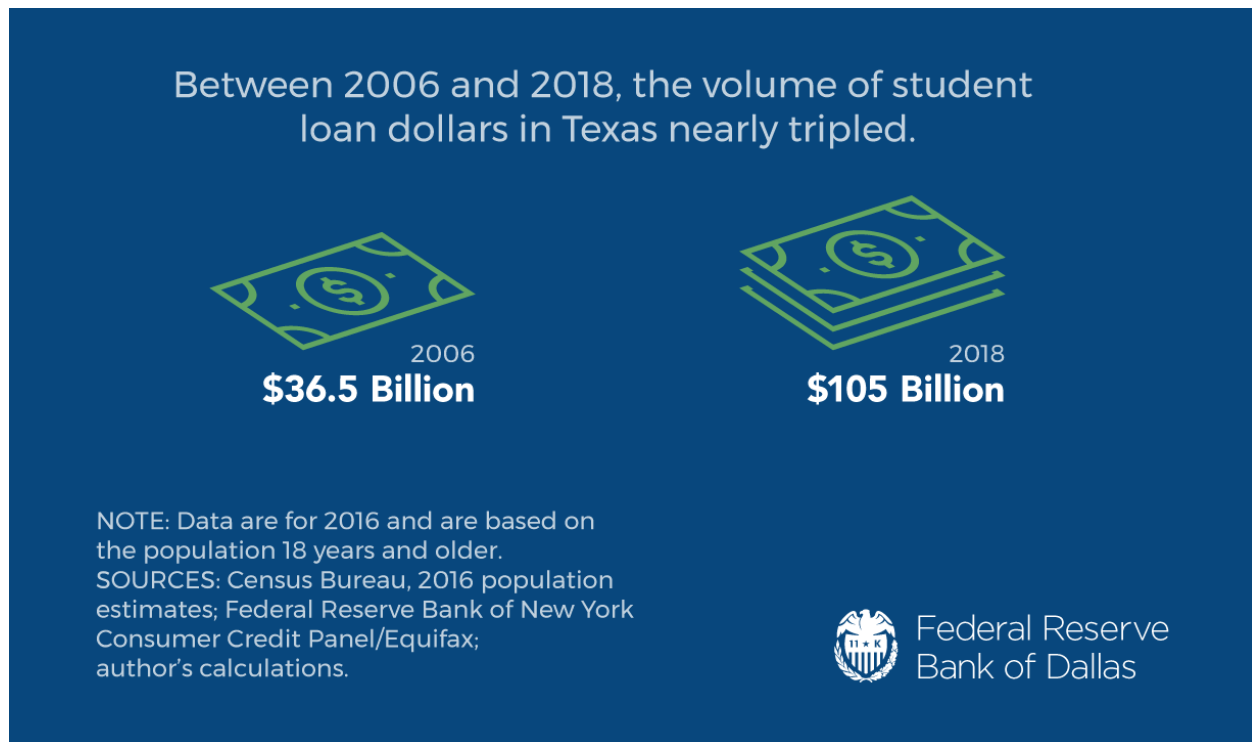**Student Loan Serious Delinquencies Ramp Up Since 2003**

NOTE: Four-quarter moving average.
SOURCE: Federal Reserve Bank of New York Consumer Credit Panel/Equifax.

Federal Reserve Bank of Dallas

There are a number of trends in student loan data that are unique. First, it is important to note that unlike other loan types, access to federal student loans is not based on credit score. Students from all credit backgrounds are offered the same price and terms of debt. This may partially explain the high rates of serious delinquencies.

Second, between 2006 and 2018, the volume of student loan dollars in Texas nearly tripled—from $36.5 billion (in 2018 dollars) to $105 billion (*Figure 4*). None of the other loan types has grown this fast. Third, the share of student loan dollars that belongs to subprime and deep subprime borrowers is high compared with other loan types. A quarter of student loan dollars are tied to deep subprime accounts compared with only 14 percent of auto, 9 percent of credit card and 4 percent of mortgage loan dollars. Given that only 14 percent of overall borrowers have deep subprime credit, an over-representative amount (25 percent) of the student loan volume belongs to those with poor credit.

Figure 4: Student Loan Volume in Texas

Between 2006 and 2018, the volume of student loan dollars in Texas nearly tripled.

2006
$36.5 Billion

2018
$105 Billion

NOTE: Data are for 2016 and are based on the population 18 years and older.
SOURCES: Census Bureau, 2016 population estimates; Federal Reserve Bank of New York Consumer Credit Panel/Equifax; author's calculations.

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Since higher education is seen as a stepping stone along the path of economic mobility, it's important to consider how student loans may affect the reality of that narrative. For those who take on debt but do not graduate, they may be saddled with a financial burden that holds them back instead of propelling them forward. Even for those who complete their degree, there is some evidence that suggests that student debt contributes to a lag in homeownership among young adults today.[20] Furthermore, some populations struggle more with repayment than others. First-generation college students, black and Hispanic students, and students who attend for-profit institutions are more likely to fall behind on student loan payments.[21]

While higher education is still considered by many to be the route to a well-paying job, the current trends in student debt—should they continue—may deter (or already be deterring) some prospective students from attending college or from taking out appropriate amounts required to graduate. Given the relatively high delinquency rates and the growing amount that each borrower holds, some Texans may conclude that the risk of taking on thousands of dollars in student loans that they may not be able to pay back is not worth it. Indeed, recent research has estimated that between 20 and 40 percent of high school seniors are averse to student debt, which may hinder enrollment in or completion of higher education.[22] With an estimated 60 percent of new jobs in Texas requiring a certificate or college degree by 2030, the state's workforce likely will rely on more Texans to make that calculation and opt for college.[23]

Conclusion

This report highlights many credit trends in Texas that warrant further research. The decline in non-prime mortgage borrowers is noteworthy, especially in light of changing lending standards. The recent increases in both auto loan and credit card loan delinquency rates are also worth investigating as our state's economic climate otherwise appears strong. Student loan debt, already a well-studied phenomenon, nevertheless deserves more attention, particularly in the context of the state's future workforce.

When it comes to questions of inclusion, the credit economy continues to try to strike a balance between credit access for consumers and avoidance of risky lending practices. With credit invisibility on the rise since 2006, it is worth asking: who can participate in the mainstream economy and what kind of economic environment does that create in our state?

Four more reports will continue to illuminate these trends in Bexar, El Paso, Harris and Travis counties. As these reports will show, each county is unique in the consumer credit trends at play and the factors that may help explain this variation.

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The information and views expressed in this report are the author's and do not necessarily reflect official positions of the Federal Reserve Bank of Dallas or Federal Reserve System; nor do they constitute an endorsement of any organization or program.

Full report is available online: https://www.dallasfed.org/cd/cct/19ccttx.

Appendix

Table A.1: Total Loan Volume by Risk Score
Second Quarter 2006 (2018 dollars)

	Percent of all borrowers*	Mortgage loan volume (percent)	Credit card loan volume (percent)	Auto loan volume (percent)	Student loan volume (percent)
		($408.4 billion)	($71 billion)	($93.5 billion)	($36.5 billion)
Prime	49	67	53	46	33
Near prime	16	14	20	20	20
Subprime	17	11	14	19	21
Deep subprime	18	8	13	16	26

Second Quarter 2018

		($542 billion)	($67 billion)	($141 billion)	($105 billion)
Prime	56	81	64	53	37
Near prime	16	10	18	18	19
Subprime	14	5	10	15	19
Deep subprime	14	4	9	14	25

*Only counts adult Texans with an active balance on a mortgage, student, auto or credit card loan. It does not include Texans with other types of loans.

SOURCES: Federal Reserve Bank of New York Consumer Credit Panel/Equifax; author's calculations.

Notes

1. Personal consumption expenditures' contribution to GDP varies, but in recent years represents about 68 percent. See Bureau of Economic Analysis, Personal Consumption Expenditures (PCE), retrieved from FRED, Federal Reserve Bank of St. Louis, April 18, 2019, https://fred.stlouisfed.org/series/PCE.

2. "Subprime Mortgage Crisis," by John V. Duca, Federal Reserve History, Nov. 22, 2013, www.federalreservehistory.org/essays/subprime_mortgage_crisis.

3. The goal of studying consumer debt at the county and subcounty level is to illuminate trends in borrowing and repayment on a local level.

4. For consistency with the American Community Survey, the year of Equifax data on this measure is 2017. Other analysis uses 2018 data.

5. "Who Are the Credit Invisibles?" Consumer Financial Protection Bureau, December 2016, https://files.consumerfinance.gov/f/documents/201612_cfpb_credit_invisible_policy_report.pdf.

6. As of fourth quarter 2017, 13.3 percent of Texans were credit-invisible compared with the 10.5 percent national average. See "Community Credit: A New Perspective on America's Communities," Federal Reserve Bank of New York, updated July 23, 2018, www.newyorkfed.org/data-and-statistics/data-visualization/community-credit-profiles/index.html#inclusion/credit_participation/Pct_Pop_NOT_in_CE.

7. "QuickFacts," Census Bureau, 2018, www.census.gov/quickfacts/fact/table/US,TX/PST045218.

8. See note 4.

9. "Measuring the Value of Education," by Elka Torpey, Bureau of Labor Statistics, April 2018, www.bls.gov/careeroutlook/2018/data-on-display/education-pays.htm.

10. For more possible explanations of the rise in student debt, see "Rising Student Debt Burdens: Factors Behind the Phenomenon," by Michael Greenstone and Adam Looney of the Brooking Institution's *The Hamilton Project*, www.brookings.edu/blog/jobs/2013/07/05/rising-student-debt-burdens-factors-behind-the-phenomenon/, July 5, 2013.

11. See "Texas Housing and Mortgage Update," by Wenhua Di, Federal Reserve Bank of Dallas *E-perspectives*, vol. 11, no. 2, 2011, www.dallasfed.org/~/media/microsites/cd/epersp/2011/2_2.html.

12. "A Record 7 Million Americans Are 3 Months Behind on Their Car Payments, a Red Flag for the Economy," Heather Long, *The Washington Post*, February 12, 2019, www.washingtonpost.com/business/2019/02/12/record-million-americans-are-months-behind-their-car-payments-red-flag-economy/?utm_term=.d79edd8cbf0b.

13. "Measures of Supply and Demand for Residential Mortgage Loans," Board of Governors of the Federal Reserve System, July 2019, www.federalreserve.gov/data/documents/sloos-201907-charts.pdf.

14. "Information, Contract Design, and Unsecured Credit Supply; Evidence from Credit Card Mailings," by Song Han, Benjamin J. Keys and Geng Li, Finance and Economics Discussion Series, Board of Governors of the Federal Reserve System, September 2015, www.federalreserve.gov/econresdata/feds/2015/files/2015103pap.pdf.

15. "Does Price Regulation Affect Competition? Evidence from Credit Card Solicitations," by Yiwei Dou, Geng Li and Joshua Ronen, Finance and Economics Discussion Series 2019-018, Board of Governors of the Federal Reserve System, February 2019, https://doi.org/10.17016/FEDS.2019.018.

16. "Just Released: Auto Loans in High Gear," by Andrew Haughwout, Donghoon Lee, Joelle Scally and Wilbert van der Klaauw, Federal Reserve Bank of New York *Liberty Street Economics* (blog), Feb. 12, 2019, https://libertystreeteconomics.newyorkfed.org/2019/02/just-released-auto-loans-in-high-gear.html.

17. See note 16.

18. See note 12.

19. Recent quarters of student loan samples often disproportionately represent particular groups of borrowers, such as those with private loans or those who have dropped out of higher education without a degree. This temporary sample selection issue causes bumpiness of trend data in recent quarters.

20. "Can Student Loan Debt Explain Low Homeownership Rates for Young Adults?" by Alvaro Mezza, Daniel Ringo and Kamila Sommer, Federal Reserve Board Division of Research and Statistics, January 2019, www.federalreserve.gov/publications/files/consumer-community-context-201901.pdf?mod=article_inline.

21. "Report on the Economic Well-Being of U.S. Households in 2017–May 2018," Board of Governors of the Federal Reserve System, June 19, 2018, www.federalreserve.gov/publications/2018-economic-well-being-of-us-households-in-2017-student-loans.htm.

22. "Understanding Loan Aversion in Education: Evidence from High School Seniors, Community College Students, and Adults," by Angela Boatman, Brent J. Evans and Adela Soliz, American Educational Research Association, Jan. 17, 2017, https://journals.sagepub.com/doi/full/10.1177/2332858416683649.

23. "The Case for a Postsecondary Credential," 60x30TX.com, 2017, www.60x30tx.com/why-60x30tx/.