The Quarterly Debt Monitor

Trends in Consumer Debt in St. Louis, Little Rock, Louisville, Memphis—and Beyond



Consumer Debt Rises for 10th Quarter in a Row

By Don E. Schlagenhauf and Lowell R. Ricketts

Introduction

♦ his is the inaugural edition of the full Quarterly Debt Monitor, a detailed report on consumer debt nationally compared to the four largest metropolitan statistical areas (MSAs) in the Eighth Federal Reserve District, which has headquarters in St. Louis.1 Each quarter—for this issue, the first quarter of 2016—this report will examine changes in total consumer debt and in specific types of liabilities: mortgages, home equity lines of credit (HELOC), automobile and student loans, and credit card balances. Our analysis also will offer a look at trends in liabilities from an age group perspective. This demographic lens is important, as different age groups account for different borrowing rates and delinquency rates within debt types.

The analysis is organized into three sections:
1) a comparison of debt trends across the nation and in the largest MSAs in the District; 2) measures of delinquency for the same regions; and 3) a special section offering more in-depth analysis of trends in auto lending. The figures in the first two sections will be presented each quarter, offering readers the ability to monitor developments in these indicators over time. The topic for the final section of this report will change each quarter; in this issue, we highlight auto loan originations by Equifax Risk Scores, the estimated creditworthiness of borrowers.

To monitor developments in consumer debt, it is imperative to examine microeconomic data rather than traditional aggregate data. Thus, this project uses the Consumer Credit Panel dataset assembled by the Federal Reserve Bank of New

Recent Developments in Consumer Liabilities

Year-over-Year Percent Change from 2015:Q1 to 2016:Q1

	United States	St. Louis MSA	Louisville MSA	Memphis MSA	Little Rock MSA
% Change in Debt					
Total	2.1	1.14	2.26	1.46	1.11
Mortgage	1.29	0.11	1.6	-1.41	-1.57
HELOC	-2.56	-5.53	-0.59	-5.88	-1.54
Auto	8.92	8.27	8.23	9.41	10.71
Credit Card	2.7	1.96	0.01	6.05	3.61
Student	3.06	1.39	1.82	4.92	1.42
Change in Serious Delinquency Rate					
Mortgage	-0.79	-0.32	-0.24	-0.44	-0.47
HELOC	-0.6	-0.89	0.32	-0.05	-0.23
Auto	0.12	-0.01	0.45	-0.37	0.63
Credit Card	-0.56	-0.18	-0.52	-0.55	0.25
Student	0.12	-1.54	1.68	-1.69	0.4

NOTES: St. Louis, Louisville, Ky., Memphis, Tenn., and Little Rock, Ark., are the largest MSAs in the Eighth District. Figures show the difference in a particular type of debt compared to the total of that type of debt the previous year. The serious delinquency rate is the share of outstanding debt for which payment is at least 90 days past due. Figures are rounded.

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

York. These data are constructed from raw credit report data provided by Equifax. See the methodology section in the appendix for definitions and technical details regarding our analysis.

The table offers a quick summary of important indicators and trends in debt levels and delinquency rates within the past year across geographic areas.²

² Looking at trends on a year-over-year basis is particularly important because of seasonal changes in consumer debt data. For example, credit card balances will likely be higher in the fourth quarter, given holiday shopping. Considering the fourth quarter in the current year and the fourth quarter in the previous year would be an apples-to-apples comparison.



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¹ The Eighth Federal Reserve District comprises all of Arkansas and portions of Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee. An MSA consists of multiple counties and includes the core urban area, as well as any adjacent counties that have a strong social and economic attachment to the urban core.

Executive Summary

This issue of the Quarterly Debt Monitor examines data for the first quarter of 2016. Highlights include:

- 1. Total real (inflation-adjusted) consumer debt in the U.S. increased by 2.1 percent in the first quarter of 2016 on a year-over-year basis. This was the 10th consecutive quarter in which debt increased after an extensive period of deleveraging—where consumers shed or paid down their debt—following the Great Recession of 2007-2009. The increases represent more economic activity as consumers take on new liabilities to finance consumption.
- 2. In the underlying debt categories, mortgages, auto loans and student loans contributed the most to the 2.1 percent national growth rate, accounting for 0.9, 0.7 and 0.3 percentage points, respectively. ³ (See Figure 4.)
- 3. U.S. residents continued to shed or pay down HELOC debt, which has declined steadily since the close of 2009. Although credit card debt increased by a strong margin, it remains well below pre-recession levels. (See the table.)
- 4. Auto and student debt continued a remarkable growth streak. (See Figures 2B and 2D.) Student debt avoided the period of deleveraging following the recession, making its strong growth all the more impressive. Unlike other categories, auto debt has grown across the entire age distribution. (See Figure 5C.)
- 5. With the exception of auto and student debt, most of the serious delinquency rates nationally and in the four MSAs declined in the first quarter from the prior year. (See the table.) The serious delinquency rate is the share of outstanding debt for which payment is at least 90 days past due. (See the methodology.) The extensive decline in serious delinquency rates suggests that the balance sheets of many households are continuing to recover from the past recession.
- 6. Across the MSAs, movements in serious delinquency rates have varied. Rates across all five debt categories declined in Memphis; still, Memphis has the highest delinquency rate for mortgage, auto and credit card debt in the District. The serious delinquency rate for student loans increased sharply in Louisville, although this may be a transitory aberration. Similar to the overall trend, mortgage delinquency declined in all four of the MSAs.
- 7. Some of the rapid growth in auto lending appears to be driven by increased lending to borrowers with lower Equifax Risk Scores and a higher risk of delinquency. This lending could lead to higher serious delinquency rates in the future, particularly if a negative economic shock occurs that destabilizes the relatively fragile balance sheets of those consumers.

Consumer Debt Grows Again

Total Debt

Following a lengthy period of deleveraging, total debt is on the rise across the nation and the District's four largest MSAs. (See Figure 1.)⁴ Aside from growth in mortgage lending, borrowing for automobile purchases and for higher education has been a substantial source of strength for lending activity. (See Figure 4.) Louisville had a faster growth rate in total debt than the nation and other MSAs did, almost entirely due to strong mortgage borrowing.

Mortgage Debt

Mortgage debt growth has been modest, but slight increases have had a meaningful impact on overall debt growth. (See Figures 2A and 4.) Across age cohorts, 31- to 40-year-olds and 66- to 75-year-olds acquired the bulk of new mortgage debt. (See Figure 5B.) In contrast, 41- to 55-year-olds lowered their mortgage balances considerably.

Among the MSAs, Louisville had overall mortgage borrowing that outpaced that of the nation and stood in stark contrast to the other MSAs, which had either declining or unchanged mortgage debt. Local contacts in Louisville said that the combination of high demand and low supply in the housing market leads to several bids on homes as soon as they reach the market. This robust activity has led to rising house prices; the CoreLogic Home Price Index in Louisville increased at a rate not seen since before the recession. Mortgage borrowing in Louisville derived unusual strength from millennials (21- to 30-year-olds) and 56-to 65-year-olds, two groups that provided little or even negative growth for the nation and other District MSAs.

The average mortgage balance (see Figure 3) across the nation was close to \$30,000 higher than that of Memphis, the highest balance among MSAs.⁵ The lower mortgage balances for the MSAs reflect in large part the lower house prices found within the region in contrast to some of the more expensive markets in the country.

Auto Debt

Across all areas, levels of auto debt exceed their pre-recession levels. (See Figure 2B.) Individuals aged 31 to 55 took on more than half of the new auto debt nationally. (See Figure 5C.) However, there was also significant borrowing activity at the youngest (1.5 percent, 21 to 30) and oldest (1.2 percent, over 66) age groups. Aside from St. Louis, the 41 to 55 and 66 to 75 age groups in the MSAs outpaced the growth rate nationally. The 31- to 40-year-old group accounted for nearly a third of the auto debt growth within Little Rock, the MSA with the highest rate. Increasing auto sales, rising auto prices, and a greater reliance on financing boosted auto debt. The average balance (see Figure 3) for a borrower was similar across geographic areas, ranging from \$12,000 in Louisville and St. Louis to \$16,000 in Little Rock.

³ About 68 percent of total debt was composed of mortgages, thus even a relatively modest rate of growth within that category (1.3 percent) contributes a great deal to the overall growth of all consumer debt

⁴ This is real total debt, adjusted for inflation.

⁵ Average balances are presented in nominal terms to make it easier for readers to compare them with their own financial liabilities.

Credit Card Debt

Credit card debt is the most ubiquitous of all types of debt within our data. In the first quarter of 2016, over half of our sample had a credit card balance. Given that credit card balances are the lowest among debt types (see Figure 3), it isn't surprising that these liabilities are the most common. Consumers across the nation and MSAs aggressively lowered their credit card debt following the recession. (See Figure 2C.) This deleveraging involved paying down balances and closing accounts. Memphis had the most extensive deleveraging; total credit card debt in the first quarter of 2016 was 63 percent of its 2003 level. (See Figure 5D.) However, within the past year, Memphis credit card debt grew by 6 percent, almost double the rate for the next highest MSA. Interestingly, a third of that growth came from the 41 to 55 age group, the same age group that saw balances decline across all other areas.

Student Loans

Total student debt (Figure 2D) increased for the nation and for the MSAs over the past year, by as much as 4.9 percent in Memphis. It's important to note that consumers didn't deleverage their student debt during and after the recession. In fact, student debt is considered to be countercyclical: Consumers may choose to take on more debt to invest in additional education during a recession when the job market is particularly weak. In general, college enrollment rates have been on an upward trend since the mid-1980s. This trend is partly reflected by the share of the population that has student loans. In the nation, the rate jumped from 12 percent to 15 percent between 2007 and 2010. However, this understates the increased investment in higher education during this time, as some students don't rely on loans. The increase does highlight a greater reliance on student loans to finance higher education. Across the MSAs, an additional 3.6 percent to 5 percent of the population borrowed for education during the same period. The average balance (see Figure 3) for a student loan borrower ranged from about \$27,000 in Louisville to \$31,000 in Memphis. Interestingly, most of the growth in overall student debt (see Figure 5E) was concentrated in the 41 to 55 age group. This growth may represent family members co-signing the loans of young borrowers.

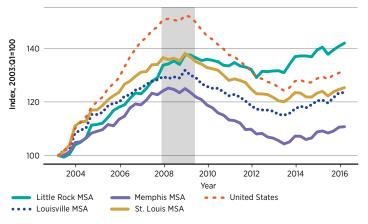
Home Equity Lines of Credit

Prior to the housing crash, HELOC debt was carried by a small share of individuals. Of the District MSAs, Louisville had the largest share (10 percent), while Little Rock had the smallest (4 percent). Those shares are much lower as of the first quarter; only 6 percent of consumers in Louisville have HELOC loans, and in Little Rock the rate has fallen to 3 percent. The deleveraging period following the recession hasn't concluded, either. (See Figure 2E.) The four MSAs and the nation registered declines, including a 6 percent decline for both St. Louis and Memphis. (See Figure 5F.) Across age groups and areas, the majority of the decline was concentrated among the 41 to 55 age group. There were some positive outliers among those over 56, but not enough to keep the total amount steady. It is unlikely that HELOC debt will rebound until

people in the 41 to 65 age range begin borrowing again, since they carry two-thirds of all HELOC debt nationally.

FIGURE 1

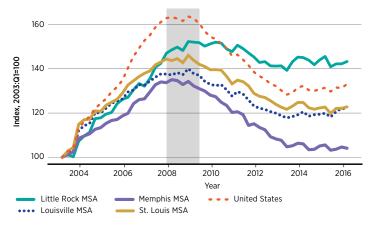
Total Real Debt



SOURCE: Federal Reserve Bank of New York/Equifax Consumer Credit panel. NOTES: "Real" data are inflation-adjusted. The gray bar indicates recession.

FIGURE 2A

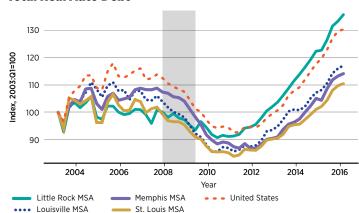
Total Real Mortgage Debt



 ${\tt SOURCE: Federal\ Reserve\ Bank\ of\ New\ York/Equifax\ Consumer\ Credit\ panel}.$

FIGURE 2B

Total Real Auto Debt



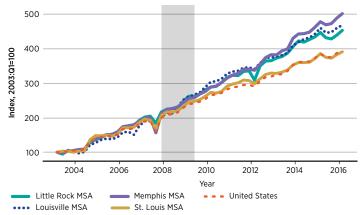
SOURCE: Federal Reserve Bank of New York/Equifax Consumer Credit panel.

FIGURE 20 **Total Real Credit Card Debt** 100 Index, 2003:Q1=100 90 60 2012 2004 2006 2010 2016 2008 2014 Year Little Rock MSA Memphis MSA United States •••• Louisville MSA St. Louis MSA

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

FIGURE 2D

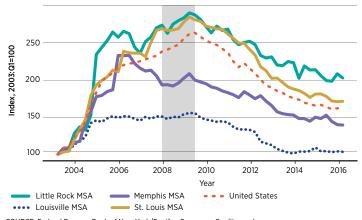
Total Real Student Debt



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

FIGURE 2E

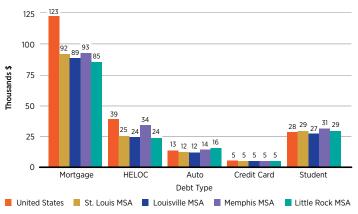
Total Real HELOC Debt



 ${\tt SOURCE: Federal\ Reserve\ Bank\ of\ New\ York/Equifax\ Consumer\ Credit\ panel}.$

FIGURE 3

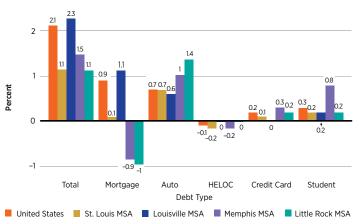
Average Debt Balance, By Type, 2016:Q1



SOURCE: Federal Reserve Bank of New York/Equifax Consumer Credit panel. NOTE: All average balances are conditional on carrying that type of debt and are reported unadjusted for inflation.

FIGURE 4

Year-over-Year Change in Debt Level by Type

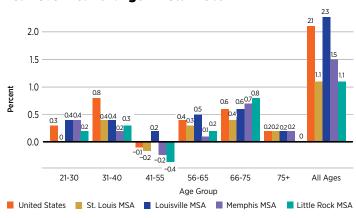


SOURCE: Federal Reserve Bank of New York/Equifax Consumer Credit panel.

NOTES: Growth in each type of debt is relative to total debt. All data labels have been rounded.

FIGURE 5A

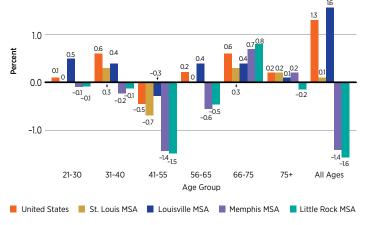
Year-over-Year Change in Total Debt



SOURCE: Federal Reserve Bank of New York/Equifax Consumer Credit panel. NOTE: Figures 5A to 5F are weighted with respect to the total by debt type.

FIGURE 5B

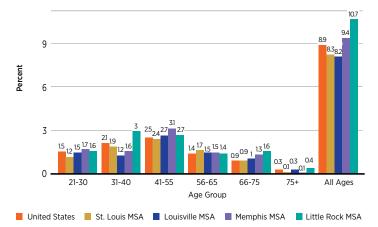
Year-over-Year Change in Mortgage Debt



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

FIGURE 5C

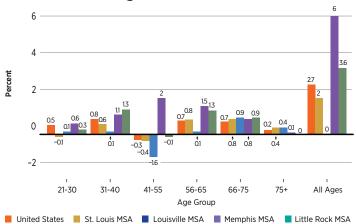
Year-over-Year Change in Auto Debt



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

FIGURE 5D

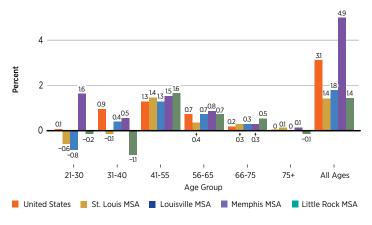
Year-over-Year Change in Credit Card Debt



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

FIGURE 5E

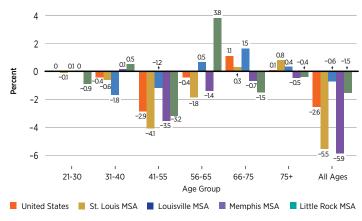
Year-over-Year Change in Student Debt



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

FIGURE 5F

Year-over-Year Change in HELOC Debt



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

Trends in Serious Delinquency

We define the serious delinquency rate as the share of outstanding debt for which payment is at least 90 days past due.⁶ Looking at the rate of debt over 90 days delinquent focuses on those instances where borrowers are having significant difficulty in meeting their payment obligations.

Mortgages

Serious delinquency rates for mortgages reflect the severity of the housing crash. (See Figure 6.) The rate for the nation presents a sharp contrast to the MSAs, as the national rate peaked at 7.7 percent in the first quarter of 2010. Among the District MSAs, Memphis was the hardest hit by the crash, with a peak of 5.8 percent in the same period. The legacy of the crash continues to wane: Serious delinquency rates declined across all areas over the past year. In fact, Memphis and Louisville have reached their pre-recession level. The majority of seriously delinquent mortgage debt remains on the balance sheet of the 41 to 55 age group.

⁶ This is only considering the balance for that specific type of debt, not total debt.

(See Figure 7A.) This group represents an even greater share of delinquent mortgage debt in Memphis.

Auto Loans

Serious delinquency rates for auto debt are under greater scrutiny given some signs of looser underwriting standards within the market. (See our special section.) While many of the rates remain higher than pre-recession levels, only a few of the areas shown here have sustained increases. Louisville and Little Rock saw their rates increase by 0.5 and 0.6 percentage points, respectively. Despite a decline over the past year, Memphis had a far higher rate of delinquency than any other area featured in this report. In addition to a higher rate of delinquency for everyone under 55, Memphis also had an elevated rate of delinquency among the 56 to 65 age group. (See Figure 7B.) This is unusual, as people in that age group typically have stronger balance sheets, which allow them to better weather financial setbacks.

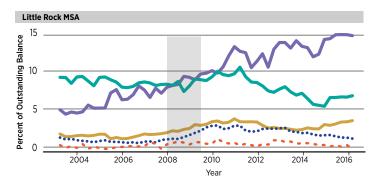
Credit Card Debt

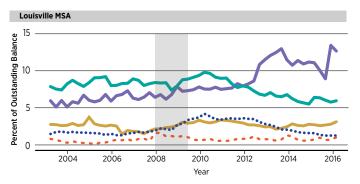
After borrowers' concerted deleveraging, the serious delinquency rate for credit card loans has reached historic lows for the MSAs and the nation. The number of credit card accounts has substantially declined, and the remaining card users are apparently better able to manage their repayment obligations. The country and the MSAs—except Little Rock—saw a continued decline in delinquency rates within the past year. (See Figure 6).

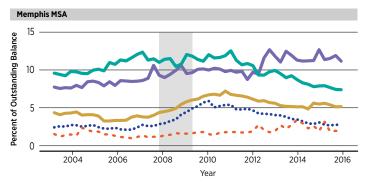
With the exception of Memphis, the District MSAs outperformed the nation with lower overall delinquency rates. (See Figure 7C.) Much of the delinquent credit card debt is concentrated in the 41 to 55 age group. However, every age group contributes to the overall rate, even the relatively small group over the age of 75.

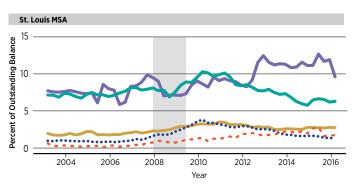
FIGURE 6

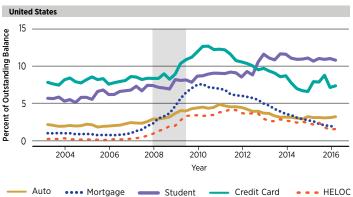
Serious Delinquency Rates, by Debt Type











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

Student Loans

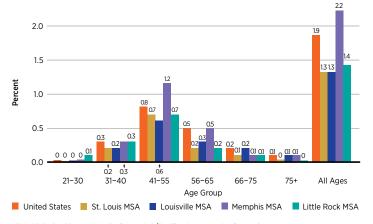
The serious delinquency rate for student loans has risen for years. In Little Rock, the rate has tripled, in effect, in the past 13 years. During that time, the serious delinquency rate nationally and in the MSAs has surpassed that of credit cards for the infamous title of worst serious delinquency rate among the debt types considered here. The younger age groups represent a larger share of the overall delinquent debt. (See Figure 7D.) This is especially true for Little Rock, where 21- to 30-year-olds had almost double the rate of delinquency than they had nationally. Making matters worse, the serious delinquency rate likely understates the severity of the problem because many students may be in deferment, forbearance or a grace period before repayment begins. Undoubtedly, some of those borrowers will fall behind on making payments.

HELOC Debt

During the recession, the national serious delinquency rate for HELOC loans rose like the delinquency rate for mortgages. However, delinquency rates for HELOC debt didn't peak until close to 2012. Many of the District MSAs, given their relatively insulated housing markets, didn't see a sustained rise. As conditions have improved, the national rate has shrunk a great deal. In contrast, the delinquency rate in St. Louis after 2010 has continued to increase. (See Figure 6.) The 66 to 75 age group accounts for almost a third of the delinquent debt in St. Louis, more than double the share seen nationally. (See Figure 7E.)

FIGURE 7A

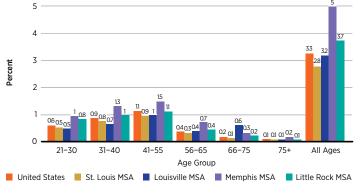
Serious Delinquency Rate for Mortgages, By Age



SOURCE: Federal Reserve Bank of New York/Equifax Consumer Credit panel NOTE: Figures 7A to 7F are weighted with respect to the total by debt type.

FIGURE 7B

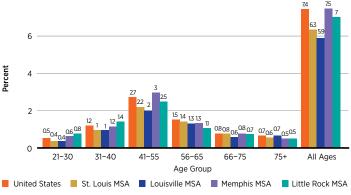




SOURCE: Federal Reserve Bank of New York/Equifax Consumer Credit panel.

FIGURE 7C

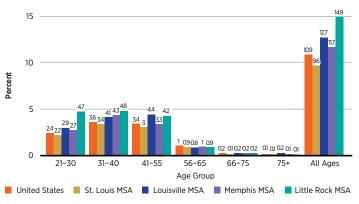
Serious Delinquency Rate for Credit Card Loans, By Age



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

FIGURE 7D

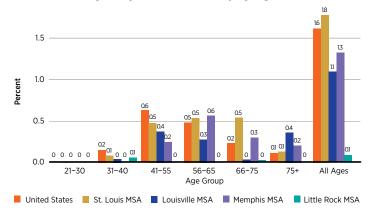
Serious Delinquency Rate for Student Loans, By Age



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

FIGURE 7E

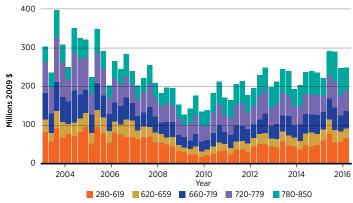
Serious Delinquency Rate for HELOC, By Age



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

FIGURE 80

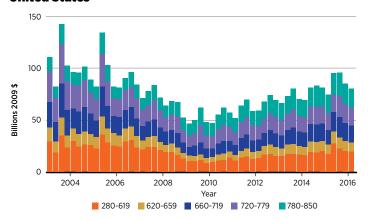
Real Auto Loan Originations, by Risk Score, Louisville MSA



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

FIGURE 8A

Real Auto Loan Originations, by Equifax Risk Score, United States



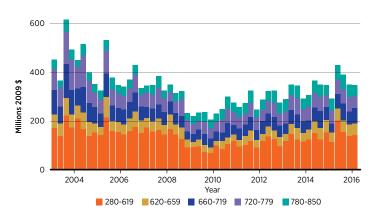
SOURCE: Federal Reserve Bank of New York/Equifax Consumer Credit panel.

NOTES: For inflation adjustment, 2009 dollars are used, in line with the Bureau of Economic Analysis' personal consumption expenditures chain-type price index. Equifax developed the score to measure lending risk. Typically, credit scores below 600 are considered subprime. A score below 500 would qualify as deep subprime.

These lower scores indicate that the borrower is more likely to have problems repaying the loan.

FIGURE 8D

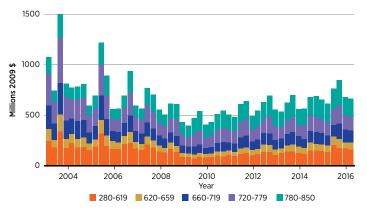
Real Auto Loan Originations, by Risk Score, Memphis MSA



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

FIGURE 8B

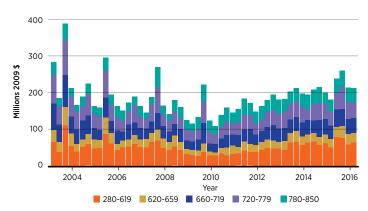
Real Auto Loan Originations, by Risk Score, St. Louis MSA



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

FIGURE 8F

Real Auto Loan Originations, by Risk Score, Little Rock MSA



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

Auto Loan Originations by Equifax Risk Score

In this section, we look at auto loan originations by Equifax Risk Score,⁷ or the estimated creditworthiness of borrowers. Given robust growth in auto debt, a closer look at the current state of underwriting standards within the auto loan market is warranted.

Some of the rapid auto debt growth has been concentrated in the subprime and deep subprime spectrum. (See Figure 8A.) The same trend in lending activity can be seen within Louisville and Little Rock. (See Figures 8C and 8E.) In Memphis, the amount of lending to that range didn't meaningfully change. (See Figure 8D.) Questions abound on the implications of this perceived riskier lending. Is this an example of predatory lending? Could the lending destabilize economic growth? Will the serious delinquency rate rise in the future?

First, lending to the lower end of the Equifax Risk Score isn't necessarily predatory lending. There are many factors to consider other than the total balance of a loan and prior credit history, such as the borrower's income and how much of that income would need to be set aside to make the payments

on the loan. Unfortunately, our dataset doesn't include information on individual income, so it's difficult to assess from a balance sheet perspective the true burden that these loans represent.

Second, this trend mirrors, although to a lesser degree, the lending patterns within the mortgage market in the run-up to the recession. However, compared with mortgage debt, auto loans comprise a much smaller share of overall debt obligations, and the average balance is a smaller burden on a typical household balance sheet. Therefore, the potential systemic risk associated with looser underwriting standards isn't comparable.

Last, the serious delinquency rate may rise in the future, given the increased lending across the credit score spectrum. More borrowers are taking on debt, and a larger share of those borrowers has had a mixed credit history. The extent of any increase will also depend on the state of the economy. A negative economic shock would destabilize the financial well-being of many Americans, particularly those who have significant debt obligations relative to their income and assets.

⁷ The Equifax Risk Score is similar to a FICO score although it is calculated using a different methodology. The former has a range of 280–850, with a higher score indicating that someone has a lower likelihood of running into repayment difficulties.

APPENDIX

Methodology

The Federal Reserve Bank of New York/ Equifax Consumer Credit Panel consists of Equifax credit report data for a longitudinal quarterly panel of individuals from 1999 to the present. Due to reporting irregularities prior to 2003, we restrict our sample so that it begins in the first quarter of 2003. The panel is a nationally representative 5 percent random sample of all individuals with a Social Security number and a credit report. Thus, our analysis excludes debt held by individuals without Social Security numbers. We use only data for individual consumers, but the sample also includes all other individuals living at the same address as the primary sample members. The resulting database includes a maximum sample of over 44 million individuals in each quarter. The Consumer Credit Panel offers a variety of variables for several important consumer debt categories:

- For mortgage debt, we combine balances for first mortgages and home equity installment loans.
- We put home equity lines of credit (HELOC) in a separate debt category because HELOC is a revolving line of credit that may fluctuate depending on when the homeowner chooses to borrow.
- Auto debt is the sum of all loans taken out to buy an automobile; these loans include those financed by a banking institution, as well as those financed by dealerships or auto financing companies.
- Credit card debt is the balance for all revolving accounts for banks, bankcard companies, national credit card companies, credit unions, and savings and loan associations.
- Student loans include all loans used to finance education expenses; the loans are provided by banks, credit unions and other financial institutions, as well as by federal and state governments.
- An omitted "other" category includes consumer finances (sales financing, personal loans) and retail (clothing, grocery, department stores, home furnishings, gas, etc.) loans. The "other" category represents a very small share of total debt, and its varied components inhibit useful interpretation of trends.

To reduce computing requirements, we use a 2 percent subsample for all national estimates and figures. For all regional analysis, we use the entire 5 percent sample in order to maximize the sample size available for smaller geographic areas. While estimating individual total balances, we avoid double counting by attributing 50 percent of the balance associated with each joint account to each individual. Aggregate debt totals are calculated by multiplying estimated figures by 20 (1 /.05) for the regional analysis and by 1,000 (1/ (.05 *.02)) for the nation. All debt figures, with the exception of average debt balance, are adjusted for inflation using the personal consumption expenditures chaintype price index, with a base year of 2009. Analysis of regional MSAs uses the latest definitions provided by the Office of Management and Budget.¹⁰

Definitions

Total Debt Balance: Total balance across all accounts, excluding those in bankruptcy.

Average Balance: All average balances are *conditional on carrying* that type of debt. For example, average student debt pertains to the average balance among individuals who have a student loan. Also, average debt balances are reported *unadjusted* for inflation. This was done to make those balances more relatable to a reader's personal financial obligations.

Equifax Risk Score: Predicts the likelihood of a consumer becoming seriously delinquent (90-plus days past due on debt). The score ranges from 280 to 850, with someone with a higher score being viewed as a better risk than someone with a lower score.

Serious Delinquency Rate: The share of debt that has a payment at least 90 days past due, divided by the total outstanding balance for that type of debt.

Debt at least 90 days past due includes:

- Debt categorized as 90 days late—between 90 and 119 days late with not more than four payments past due;
- 120 days late—at least 120 days past due with five or more payments past due;
- · In collections: and
- Severely derogatory—any of the previous states combined with reports of a repossession, charge-off to bad debt or foreclosure.

The total outstanding balance includes debt at least 90 days past due in addition to:

- Debt which is current or paid as agreed;
- 30 days late—between 30 and 59 days late with not more than two payments past due; and
- 60 days late—between 60 and 89 days late with not more than three payments past due.

Not all creditors provide updated information on payment status, especially after accounts have been derogatory for a longer period of time.

Student Loan Reporting Issues: There are some reporting issues related to student loans in the raw Equifax data. This involves a temporary or sustained period of nonreporting of student loan accounts. We leave the data as they were provided by Equifax.

Auto Loan Originations: In calculating the balance of new auto loan originations, we use both the number of accounts and total balance on an individual credit report in consecutive quarters. New auto loan originations are then defined as an increase in the balance accompanied by an increase in the number of accounts reported.

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⁸ The latest observation is the first quarter of 2016.

⁹ Lee, Donghoon; and van der Klaauw, Wilbert. "An Introduction to the FRBNY Consumer Credit Panel," Federal Reserve Bank of New York Staff Reports, Staff Report No. 479, November 2010. See newyork-fed.org/medialibrary/media/research/staff_reports/sr479.pdf

¹⁰ Donovan, Shaun. "OMB Bulletin No. 15-01," Office of Management and Budget, July 15, 2015. See www.whitehouse.gov/sites/default/files/omb/bulletins/2015/15-01.pdf.