SURF Research Brief

The Public FR Y-14 Retail Credit Data Set

By Caleb Hoover and Jeremy Cohn[1]

Brief History and Overview of the Federal Reserve FR Y-14 Public Data Set

In his book "*Stress Test: Reflections on Financial Crises*," former Secretary of the U.S. Treasury Timothy Geithner stated, "Financial stability cannot depend on omniscient supervisors identifying and preemptively defusing any potential source of crisis; it requires safeguards that can help the system withstand the force of a severe storm, and tools the government can use to limit the damage."

Many of the safeguards in place today were borne out of the passage of the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010. One such safeguard, the Federal Reserve's FR Y-14 report, has served as the primary data source in assessing the capital adequacy of the largest bank holding companies (BHCs) in the U.S., becoming an essential tool for the nation's chief regulator of BHCs. The FR Y-14 series collects portfolio and loan-level data from respondent firms and is used for supervisory stress test modeling to support continuous monitoring efforts and to inform operational decision-making at the Federal Reserve System. Because of the highly confidential nature of the data, access is typically limited to a subset of FRS employees with a valid business need.

However, in response to the public request for greater transparency around confidential regulatory data, the Federal Reserve Bank of Philadelphia began publishing a highly aggregated public FR Y-14 retail credit data set covering credit cards and first-lien mortgages.[2, 3] These data provide unique insights into large BHC credit card and mortgage lending trends and may be of

[1] This commentary was written by Caleb Hoover and Jeremy Cohn, quantitative analysts at the Federal Reserve Bank of Philadelphia. The views expressed here are solely of the authors and do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

[2] For more information on retail data collected for the FR Y-14, see the FR Y-14Q and FR Y-14M instructions and forms. These data are derived from the Federal Reserve FR Y-14M data schedules. This publication is on a quarterly release schedule. The time series began in the third quarter of 2012 and are not seasonally adjusted. The respondent panel comprises U.S. bank holding companies, U.S. intermediate holding companies of foreign banking organizations, and covered savings and loan holding companies with $100 billion or more in total consolidated assets. These institutions are required to report credit card or first-lien mortgage data if portfolio balances exceed $5 billion or are material relative to Tier 1 capital. Firms with more than $100 billion in total consolidated assets that do not meet these thresholds may also voluntarily provide FR Y-14M data.

[3] To view the latest FR Y-14 public data and analysis provided through the *Insights* report, visit the Large Bank Credit Card and Mortgage Data site.

great use to bankers, researchers, and industry experts alike. FR Y-14 reporters will now be able to benchmark firm-level card and mortgage metrics such as balances, originations, median loan sizes, and credit performance against publicly aggregated Y-14 data. The FR Y-14 public data set also provides unique insights into credit card variables that are not readily available in the public domain, such as cardholder payment behavior and credit line increase/decrease activity. A more detailed overview of the FR Y-14 public data, including market coverage, variables, and data adjustments, can be found in the Appendix. The Federal Reserve Bank of Philadelphia also provides an FR Y-14 Data Methodology document on its public-facing website.

Variables of Interest and Current FR Y-14 Public Data Trends

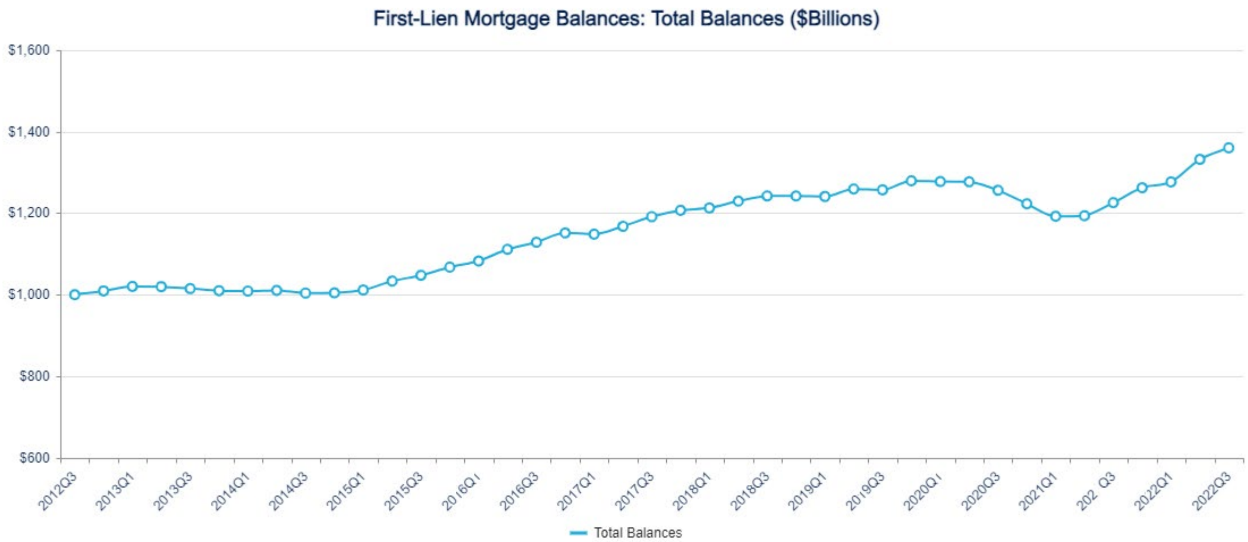
A complete list of the 75 variables published in the FR Y-14 public data is provided in the Appendix. Data are available from third quarter of 2012 to the present, with a roughly three-month lag in reporting time from quarter end. For instance, data from September 30, 2022, were posted in January 2023. Through the first three quarters of data publication (first quarter 2022–third quarter 2022), variables receiving the most interest can be tied to emerging risk issues and shifts in economic trends. We provide descriptions of these high-interest variables below and some commentary to accompany the data:

In the third quarter of 2022, **first mortgage originations** fell **(Figure 1)**, continuing the downward trend seen throughout most of 2022. This contrasts with 2021, which saw the largest annual volume of originations since 2012 accompanied by rapid house price increases as historically low-interest rates and increased housing demand drove originations on a continued upward trajectory, following a slight dip at the onset of the COVID-19 pandemic.

Figure 1: First-Lien Mortgage Originations

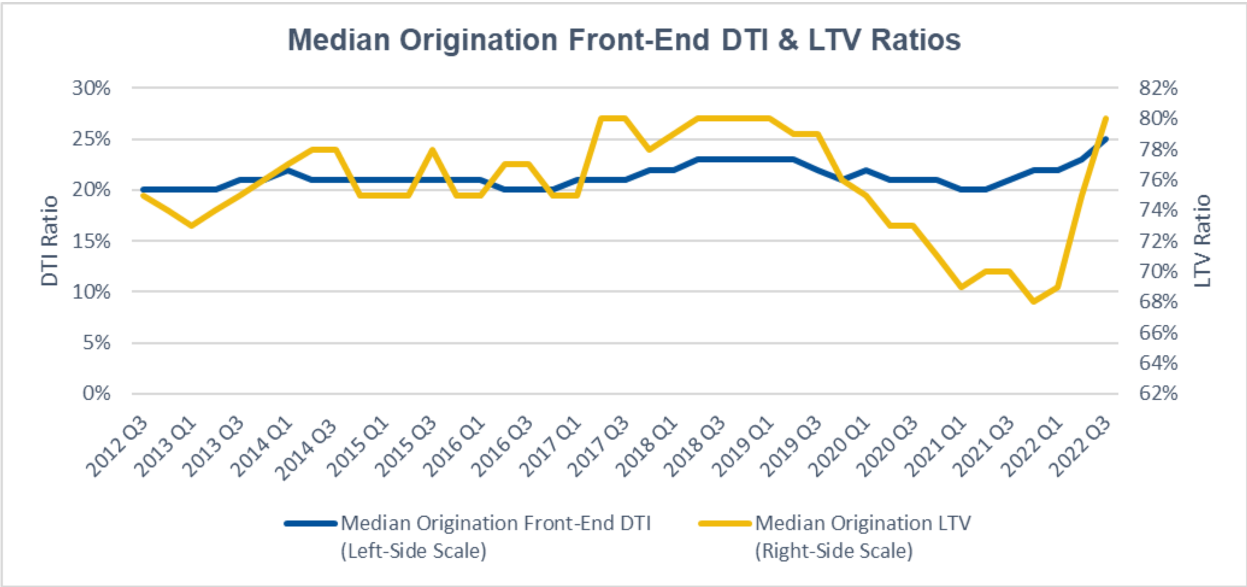
Even with rapidly declining origination values, **first-lien balances** have continued their upward climb **(Figure 2)**. While this trend could potentially plateau or even reverse as market and economic conditions have begun to worsen, Y-14 firms reported their highest-ever level of mortgage balances in the third quarter of 2022.

Figure 2: First-Lien Mortgage Balances



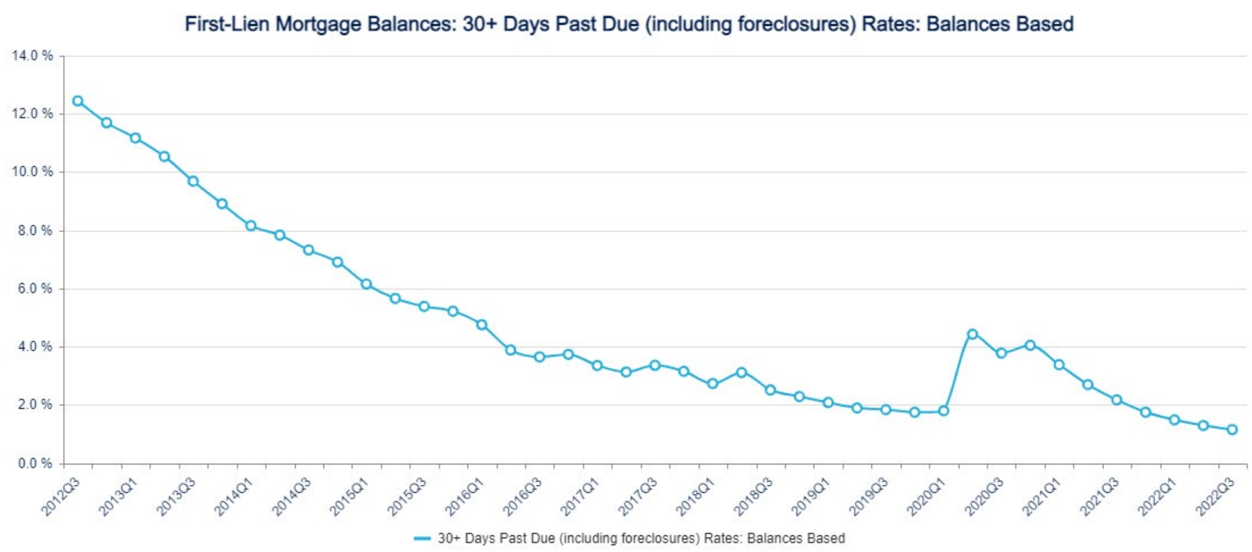
Median mortgage origination loan-to-values (LTVs), which are rapidly increasing to prepandemic levels, have risen from 68 percent in the fourth quarter of 2021 to 80 percent in the third quarter of 2022 **(Figure 3)**. Home affordability issues have become apparent in an inflationary environment, as the median debt-to-income (DTI) ratio on newly originated mortgages has climbed from 21 percent in the third quarter of 2021 to 25 percent in the third quarter of 2023, the highest reported level on record. As rising mortgage rates reduce refinance demand and as originations fall, purchase loans constitute a greater share of new originations, which has also helped push LTV and DTI ratios higher.

Figure 3: Median Origination Front-End DTI and LTV Ratios



Finally, mortgage borrowers have shown great resilience throughout and after the COVID-19 pandemic. First-lien mortgage delinquency rates have reached historically low levels after an initial uptick at the onset of the pandemic **(Figure 4)**. The uptick was due in large part to Y-14 firms extending — and borrowers accepting — an unprecedented number of forbearances and payment pauses, which led to a surge in past due balances.[4] As large-scale pandemic assistance programs have expired and payments have resumed, delinquencies have continued on a downward trend.

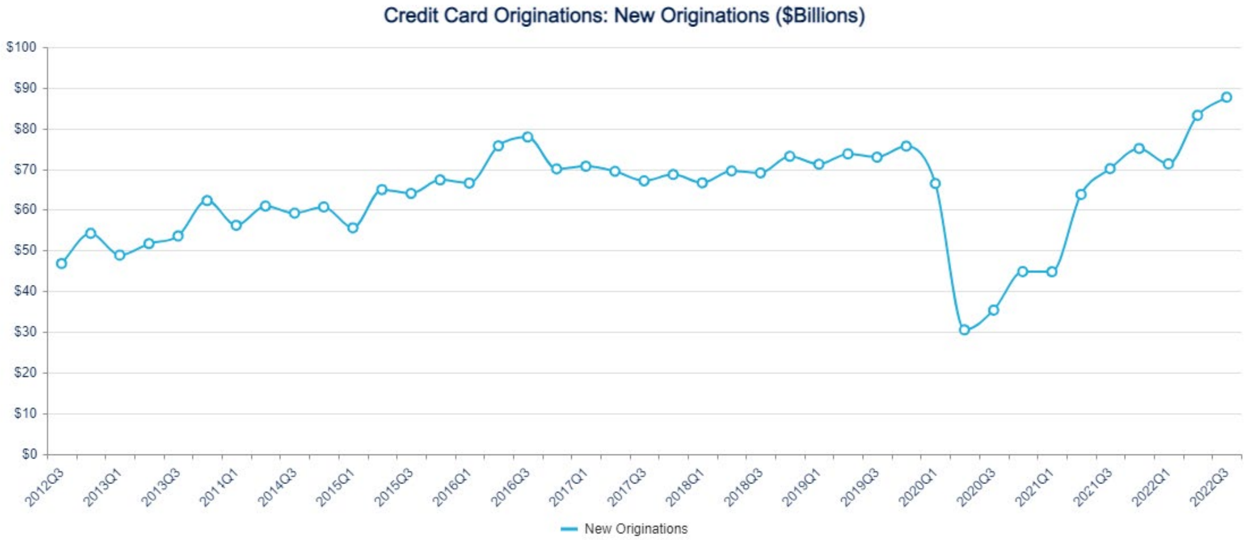
Figure 4: First-Lien Mortgage 30+ Days Past Due Rate



[4] Some firms still reported forbearance loans as delinquent in Y-14 reporting even though the CARES Act required forbearance not to be reported as delinquent on credit reports.

In contrast to mortgage originations, new **card originations** continue to climb after bottoming out at the height of the pandemic, reaching a series high during the third quarter of 2022 **(Figure 5)**. A recent Credit Access Survey[5] by the Federal Reserve Bank of New York indicates a higher average likelihood of households applying for a new credit card or credit line increase over the next 12 months, indicating that consumers will likely lean more heavily on revolving credit in the current economic environment.

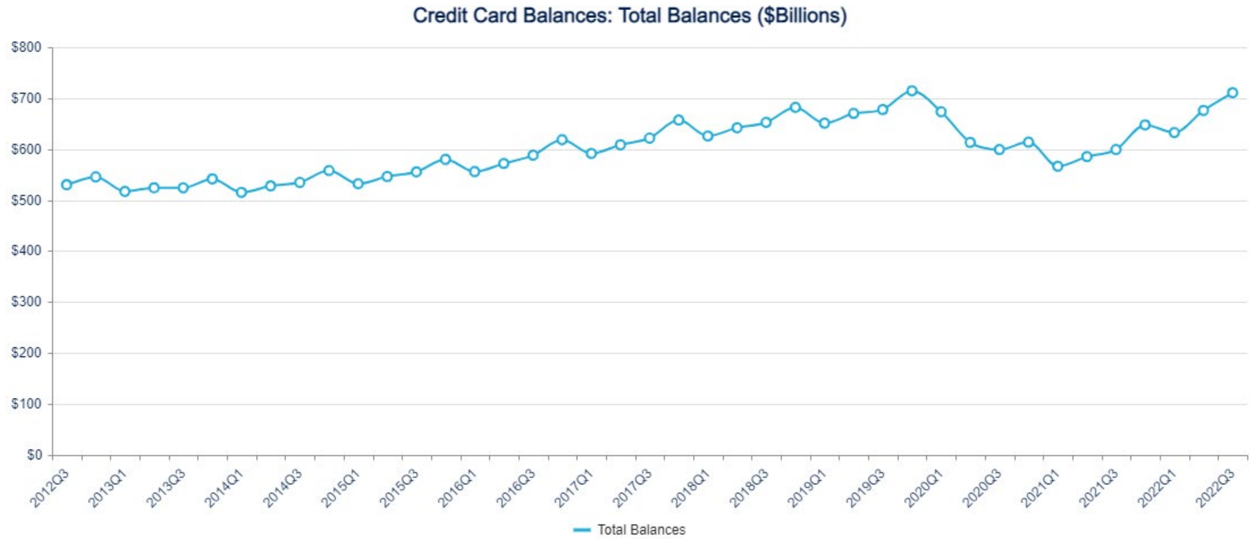
Figure 5: Credit Card Originations



Similarly, **card balances** have begun to see upward pressure and now exceed levels seen in the third quarter of 2019 **(Figure 6)**. Throughout the pandemic, consumers generally spent less as economic restrictions hit the retail sector particularly hard. Excess cash deposits, accrued as a result of large-scale COVID-19 stimulus and stifled consumer spending following the onset of the pandemic, were used to pay down high-interest debt. Y-14 public data indicate the trends have begun to reverse.

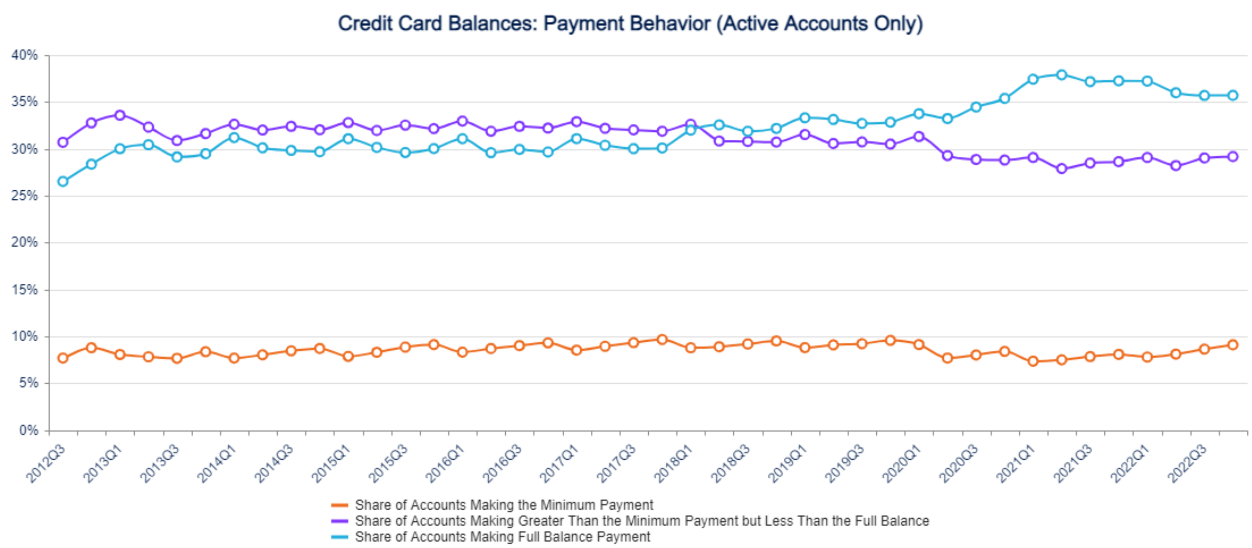
[5] See the Federal Reserve Bank of New York's SCE Credit Access Survey.

Figure 6: Credit Card Balances



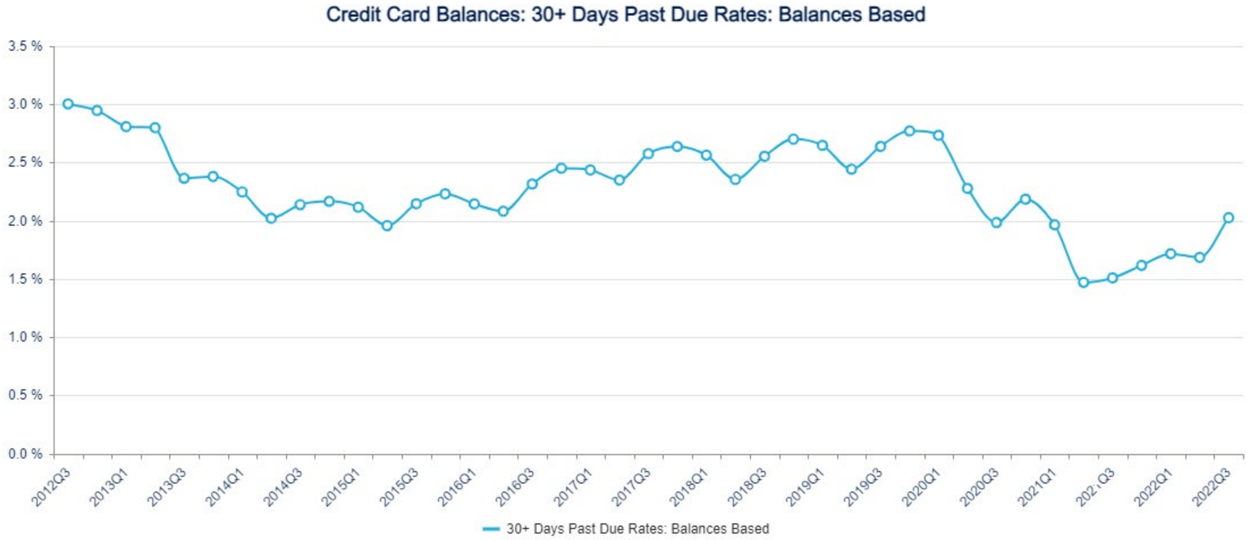
As balances have begun to climb, the **share of borrowers making a minimum payment, or more than the minimum but less than the full monthly payment**, has begun to increase **(Figure 7)**. Full balance payments became much more common during the pandemic due to factors such as lower consumer spending and excess cash reserves. While rates are still below prepandemic levels, borrowers are beginning to revolve more balances from month to month, leading to increased interest income.

Figure 7: Credit Card Payment Behavior



Unlike mortgages, card delinquencies are beginning to show upward pressure as pandemic assistance has waned, and an inflationary economic environment has begun to eat away at customer deposits **(Figure 8)**. In the third quarter of 2022, the 30+ days past due (DPD) rate for credit cards showed a 52-basis point (bps) year-over-year increase, by far the largest since the onset of the Y-14 data collection in the third quarter of 2012. While delinquencies remain below prepandemic levels and the base effect should be considered as delinquencies are rising from historical lows, recent Y-14 data indicate a continued normalization to prepandemic levels.

Figure 8: Credit Card 30+ Days Past Due Rate



FR Y-14 Public Data Early External Interest

While external interest in FR Y-14 public data is still in its infancy, it has already produced noteworthy analysis, research, and debate. Regulators such as the Office of the Comptroller of the Currency (OCC), Federal Deposit Insurance Corporation (FDIC), and Consumer Financial Protection Bureau (CFPB) are granted access to a Y-14 data sample. Y-14M data are used in the creation of external reports, such as a biannual CFPB's *Consumer Credit Market Report*,[6] a congressionally mandated publication. Y-14 public data can be used by regulatory agencies for monitoring and analysis purposes between report publications and for further research. A recent FRED blog post[7] by Diego Mendez-Carbajo, a senior economic education specialist at the Federal Reserve Bank of St. Louis, used Y-14 card utilization figures from the Y-14 public data to demonstrate the cyclical nature of consumer spending. Balances tend to tick up with holiday spending in the fourth quarter.

The Bank Policy Institute (BPI), a nonpartisan public policy, research, and advocacy group that represents a number of universal, regional, and major foreign banks conducting business in the U.S., has also begun to use FR Y-14 public data in its analysis. A recent blog post[8] titled "Missing Factors in the CFPB's Analysis of Rising Credit Card Interest Rates" provided an alternative explanation to CFPB's assertion that rising interest rates for credit card revolvers who carry balances from month to month are a result of decreased competition within the credit card market. BPI posited that a shift to Current Expected Credit Loss (CECL) accounting standards

---

[6] See https://files.consumerfinance.gov/f/documents/cfpb_consumer-credit-card-market-report_2021.pdf.
[7] See Credit Card Balances Utilization Rates – The fourth quarter is the season for charging.
[8] See Missing Factors in the CFPB's Analysis of Rising Credit Card Interest Rates — Bank Policy Institute (bpi.com).

helped push rates upward. BPI stated that the "increase in credit card interest rates reflects originations of loans with higher risk rather than a lack of competition in the credit card market." The blog post referenced payment data from the FR Y-14 public data, which indicated that increased rates roughly correspond with the share of FR Y-14 public card accounts making a full balance payment each month.

Future Plans and Where to Access the Y-14 Public Data

Despite a years-long development process, the FR Y-14 public data set is still in its nascency. As external feedback is sourced and gauged to determine future avenues for expansion and improvement, several ideas are already under consideration. Variables can be added or modified within the existing FR Y-14 public data as consumer credit trends and risk factors evolve over time. Expanding the data set to include other retail data reported in the FR Y-14, such as auto and other consumer loans, is another possible next step. FR Y-14 reporters represent roughly one-third of the market share of the U.S. auto loan market, and other consumer balances have shown significant growth in recent years at both traditional banks and fintech firms, providing fertile ground for further analysis.

The Federal Reserve Bank of Philadelphia welcomes feedback and suggestions for additional variables or modifications. Please send all inquiries via email to Phil.LargeBankData@phil.frb.org. To explore the FR Y-14 public data further, visit the Large Bank Credit Card and Mortgage site to download our data in tabular or chart form, review our latest *Insights* report, and learn more about our data methodology. All FR Y-14 public variables are also available for use on FRED. If you are interested in receiving quarterly notifications when the data are refreshed and a new *Insights* Report is released, please sign up here.

Appendix: Public FR Y-14 Data Details

Credit card data in this publicly available data set includes only consumer bankcards and excludes small business, corporate, and consumer charge cards. Most credit card variables are calculated using all accounts that are open and not charged-off. A few credit card variables include active credit card accounts only. Reported balances are as of quarter end.

The Federal Reserve Bank of Philadelphia estimates that credit card balances in the aggregate FR Y-14 data represent roughly three-quarters of the total U.S. bank card balances. Quarterly credit card originations represent the monthly sum of originations in the given quarter. Dollar originations are calculated based on the new account's initial assigned credit limit.

First-lien mortgage data are closed-end loans secured by 1- to 4-family residential real estate. These loans include both first-lien mortgages and first-lien home equity loans. These data comprise loans held on the balance sheet in the reporting month. Reported balances are as of quarter end. The Federal Reserve Bank of Philadelphia estimates that first-lien mortgage portfolio loans in the aggregate FR Y-14M data represent approximately 1/10th of the total U.S. residential mortgage market debt. Quarterly mortgage originations represent the monthly sum of portfolio-held originations in the given quarter. *Originations* are defined as the first time the loan appears in the data. Thus, newly purchased loans are also included in the new origination data.

Our analysis indicates that approximately two-thirds to three-quarters of originations that are initially reported as *portfolio owned* are ultimately sold or securitized. Consequently, the mortgage origination data include all bank loans originated and held in portfolio in each quarter, including those that will later be sold or securitized.

The Federal Reserve Bank of Philadelphia adjusts the data to provide a consistent historical time series and to protect confidential firm information. When a new firm enters the reporting panel, we adjust historical data to extrapolate the impact of that new entrant over time. Firms that cease reporting because they no longer meet the materiality threshold are removed from the data for all periods.[9] As a result of these adjustments, historical data will periodically change. For such changes, the Federal Reserve Bank of Philadelphia will ensure a time series that is comparable across periods and provide a reporting panel that is representative of the full set of FR Y-14 reporters.

First-lien mortgages and originations are provided in aggregate (in dollars and number of accounts), as well as at the 50th, 75th, and 90th percentile for original (for originations) and current (for balances) credit score, original front-end and back-end debt-to-income (DTI) ratios, as well as original loan-to-value (LTV) ratios. Additionally, accounts and balances-based 30+, 60+, and 90+ days past due (DPD) totals are reported inclusive of foreclosures.

[9] For more information on data adjustments and variables included in the FR Y-14 public, please review the Y-14 Public Data Methodology.

Similar to the first-lien mortgage portfolio, credit card balances and originations are provided in aggregate (in dollars and number of accounts), as well as at the 50th, 75th, and 90th percentile for original credit score (for originations) and current credit score (for balances). Accounts and balances-based 30+, 60+, and 90+ DPD rates are also reported for the card portfolio. As was previously mentioned, the card portfolio contains additional variables compared with the mortgage data, which provide useful insights into unsecured credit lending and usage.

A few notable additions include line utilization (reported at the 50th, 75th, and 90th percentile), total *revolving* credit card debt, the share of accounts making minimum monthly payments, the share making greater than the minimum payment but less than the full balance, and the share paying the full balances, as well as the percentage of accounts with a line increase or decrease within the quarter.

Figure A1: FR Y-14 Public Credit Card Variable List

Credit Card Balances	Credit Card Originations
Number of Accounts (Millions)	Number New Accounts (Millions)
Total Commitments ($Billions)	Total New Commitments ($Billions)
Total Balances ($Billions)	Original Credit Limit (50th percentile)
Balances (50th percentile)	Original Credit Limit (75th percentile)
Balances (75th percentile)	Original Credit Limit (90th percentile)
Balances (90th percentile)	Original Credit Score (10th percentile)
Current Credit Limit (50th Percentile)	Original Credit Score (25th percentile)
Current Credit Limit (75th Percentile)	Original Credit Score (50th percentile)
Current Credit Limit (90th Percentile)	
Current Credit Score (10th percentile)	
Current Credit Score (25th percentile)	
Current Credit Score (50th percentile)	
Utilization (50th percentile)	
Utilization (75th percentile)	
Utilization (90th percentile)	
Credit Line Decrease	
Credit Line Increase	
90+ Days Past Due Rates: Accounts Based	
90+ Days Past Due Rates: Balances Based	
60+ Days Past Due Rates: Accounts Based	
60+ Days Past Due Rates: Balances Based	
30+ Days Past Due Rates: Accounts Based	
30+ Days Past Due Rates: Balances Based	
Revolving Credit Card Debt ($Billions)	
Share of Accounts Making the Minimum Payment	
Share of Accounts Making Greater Than the Minimum Payment but Less Than the Full Balance	
Share of Accounts Making Full Balance Payment	

Figure A2: FR Y-14 Public First-Lien Mortgage Variable List

First Lien Mortgage Balances	First Lien Mortgage Originations
Balances ($Billions)	New Originations ($Billions)
Number of Accounts (Millions)	Number of New Accounts (Thousands)
Balances ($) (50th percentile)	Original Loan Size (50th percentile)
Balances ($) (75th percentile)	Original Loan Size (75th percentile)
Balances ($) (90th percentile)	Original Loan Size (90th percentile)
Current Credit Score (10th percentile)	Original Credit Score (10th percentile)
Current Credit Score (25th percentile)	Original Credit Score (25th percentile)
Current Credit Score (50th percentile)	Original Credit Score (50th percentile)
Original Backend Debt to Income (DTI) (50th percentile)	Original Backend Debt to Income (DTI) (50th percentile)
Original Backend Debt to Income (DTI) (75th percentile)	Original Backend Debt to Income (DTI) (75th percentile)
Original Backend Debt to Income (DTI) (90th percentile)	Original Backend Debt to Income (DTI) (90th percentile)
Original Frontend Debt to Income (DTI) (50th percentile)	Original Frontend Debt to Income (DTI) (50th percentile)
Original Frontend Debt to Income (DTI) (75th percentile)	Original Frontend Debt to Income (DTI) (75th percentile)
Original Frontend Debt to Income (DTI) (90th percentile)	Original Frontend Debt to Income (DTI) (90th percentile)
Original Loan to Value (LTV) (50th percentile)	Original Loan to Value (LTV) (50th percentile)
Original Loan to Value (LTV) (75th percentile)	Original Loan to Value (LTV) (75th percentile)
Original Loan to Value (LTV) (90th percentile)	Original Loan to Value (LTV) (90th percentile)
90+ Days Past Due (inc. foreclosures) Rates: Accounts Based	
90+ Days Past Due (inc.foreclosures) Rates: Balances Based	
60+ Days Past Due (inc. foreclosures) Rates: Accounts Based	
60+ Days Past Due (inc. foreclosures) Rates: Balances Based	
30+ Days Past Due (inc. foreclosures) Rates: Accounts Based	
30+ Days Past Due (inc. foreclosures) Rates: Balances Based	