2024 Q2 Credit Risk Review

Trends and Early Risk Indicators in Consumer Credit

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Executive Summary – State of the US Consumer Credit

Inflation is cooling and the labor market was steady through Q2, but a July uptick in unemployment, dwindling spending, and other mixed consumer health signals indicate that American consumers are feeling squeezed.

Headwinds

- As necessity prices such as housing and automobile costs remain historically elevated, spending has softened on discretionary purchases, especially for younger generations.
- Both credit card debt and credit card interest rates are at or near recent historical highs, and the latter may continue to grow given uncertainty about late fee regulations.
- High mortgage rates and rising home prices are contributing to a stagnant housing market.
- Wage growth is on the decline and July unemployment ticked to its highest level since October 2021.

Tailwinds

- Although the savings rate has continued to decline, strong growth in household wealth and continued growth of interest-bearing accounts help contextualize the savings downswing.
- Mortgage rates are slightly down from the peak last fall and mortgage lock-in seems to be easing.

Executive Summary - Credit Cards

Credit Cards

- Average credit card interest rates have been on the rise and reached a peak in February 2024 at 21.69%. As banks anticipate the effects of new CFPB late fee regulation, interest rates may continue to rise.
- Overall delinquencies remain elevated compared to pre-pandemic levels with sustained year-over-year (YoY) increases. June 2024 saw a 27 bp increase compared to the same time in 2023, while Q2 2024 overall trends remained in line with seasonal patterns.
- Recent credit card vintages have slightly better delinquency rates than 2021 and 2022 vintages overall, while vintage performance within risk bands remains similar.
- Subprime card origination volumes have dropped since the second half of 2022 as lenders have tightened their underwriting standards. Despite this, subprime total balance continues to increase.
- Average credit limit at origination increased largely due to tighter underwriting.

Executive Summary - Personal Loans & Auto Loans

Personal Loans

- Monthly personal loan delinquency rates remain well below pre-pandemic averages, with Q2 2024 trends aligning with seasonal patterns.
- Subprime delinquencies continue to decrease below long-term averages while low-risk bands are flattening.
- Tightened underwriting and high interest rates have driven origination declines since the second half of 2022. Average origination FICO remains high, with early signs of income levels stabilizing over the past two quarters.
- Recent vintages after H2 2022 are outperforming older ones in line with tighter underwriting among lenders. The improved vintage performance in high-risk groups is apparent while low-risk groups performed similarly to previous years.

Auto Loans

- Auto loans recently overtook student loans as the largest type of non-mortgage consumer debt.
- Total balance is experiencing near-constant growth despite a modest decrease in June. Loan balance from subprime groups has grown significantly and now exceeds the near-prime group.
- Auto loan (all loan) delinquencies are higher than in 2023. Tax return season likely contributed to Q2 delinquency decrease.

Executive Summary – Student Loans & Mortgages

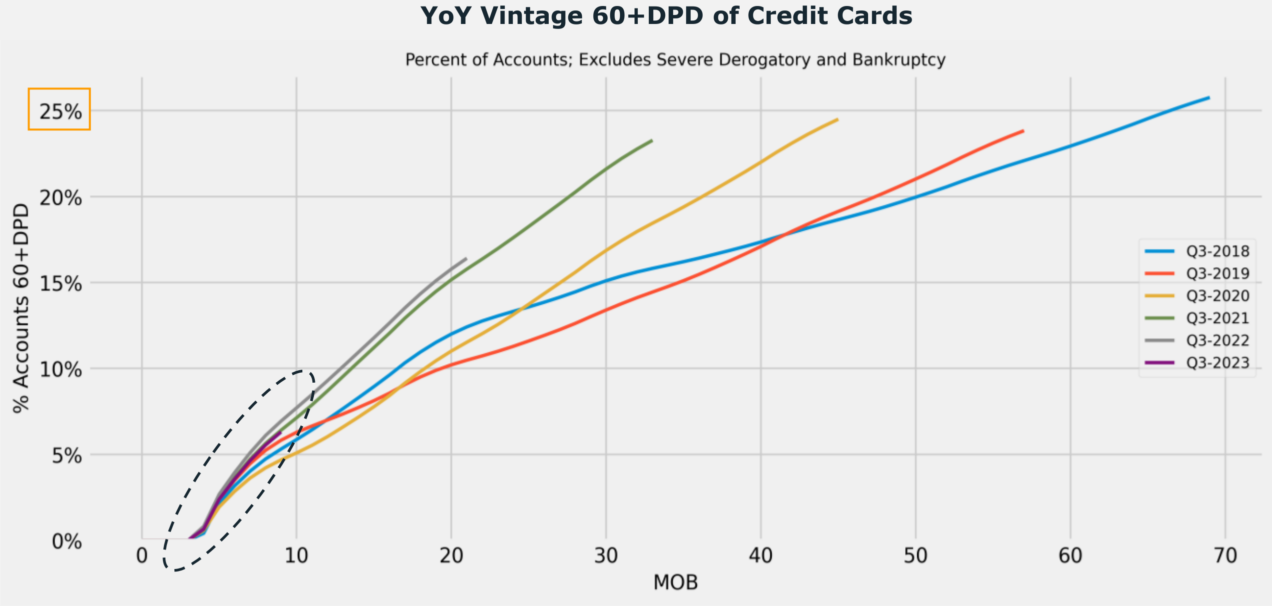
Student Loans

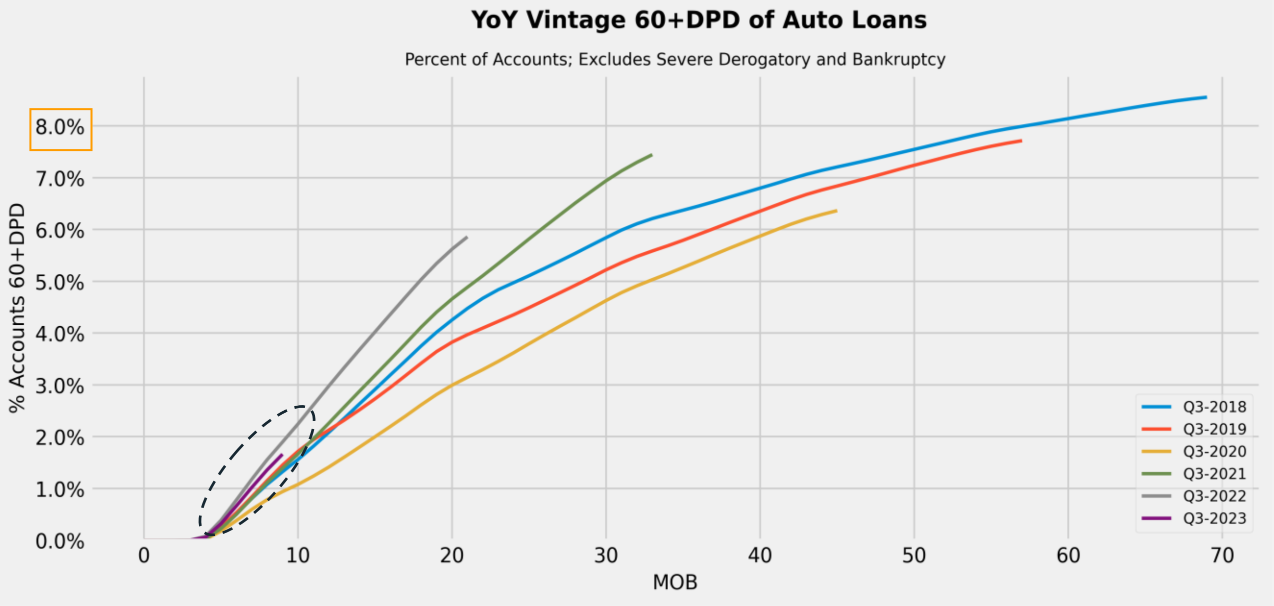
- Total balance has been regrowing since the drop in 2023.
- The population of younger borrowers is in a steady but significant decline, while other groups remain stable.
- The public student loan delinquency rate is not available until Sept. 2024 due to the on-ramp.

Mortgages

- Despite the slight decline in mortgage rates, mortgage originations were down YTD through April compared to 2023.
- Newer mortgages performed significantly worse than older ones, maintaining higher delinquency rates by month on book.
- Average subprime origination balance dropped in Q2 while the overall population's average balance increased steadily.
- HELOC total credit limits continue to grow, reaching pre-pandemic scale. The delinquency rate decreased from the Q1 recent high point.

Recent credit card and auto vintages are showing slight improvement from previous years, while vintage performance within risk bands remains similar



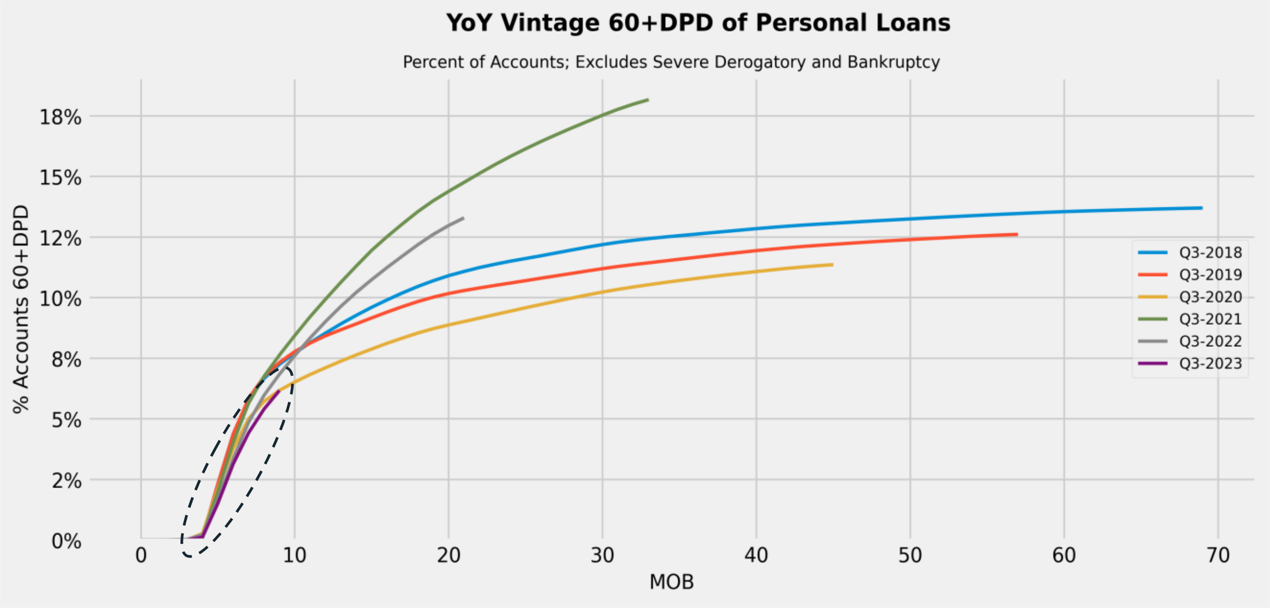


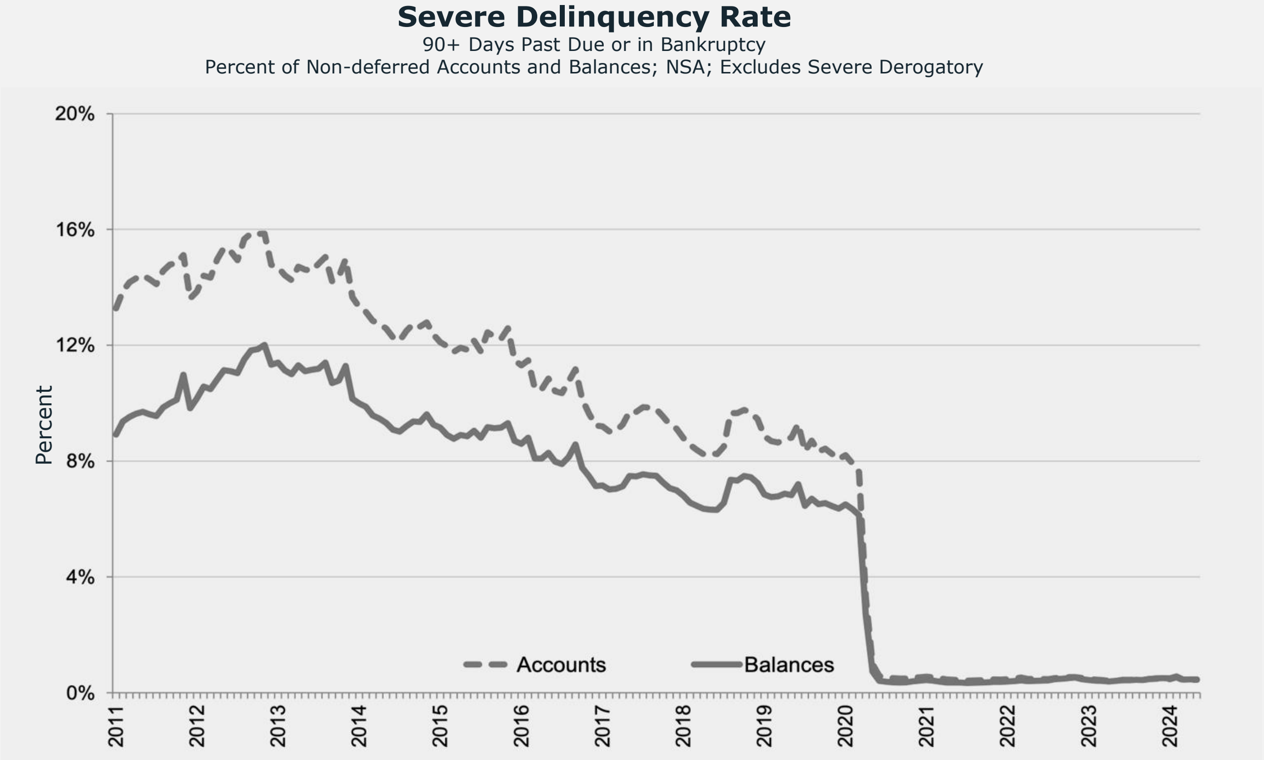
Recent tightening in subprime originations helps explain overall improvement in vintage performance while individual risk group performance remained similar

Car values have dropped from their high point in 2022, leading to a decrease in monthly payments for used cars, which may help explain improved performance

Source: 2OS, Equifax Ignite. Data as of June 30th, 2024. See slides 19 and 32. DQ rates for vintage performance are cumulative

Newer personal loan vintages are outperforming previous vintages, while public student loan performance remains unreported





After adjusting for Vantage Score at time of origination, improved performance in high-risk groups is apparent while low-risk groups performed similarly to previous years

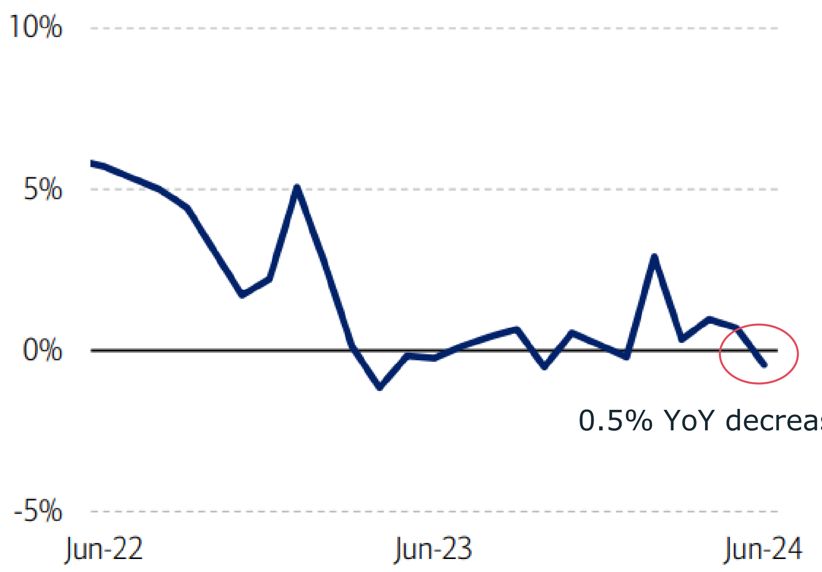
The government will resume reporting federal student loan delinquencies to credit bureaus after the on-ramp period which ends on September 30, 2024

Left: 2OS, Equifax Ignite. Data as of June 30th, 2024. See slide 30, DQ rates for vintage performance are cumulative. Right: Equifax. Data as of May 31st, 2024

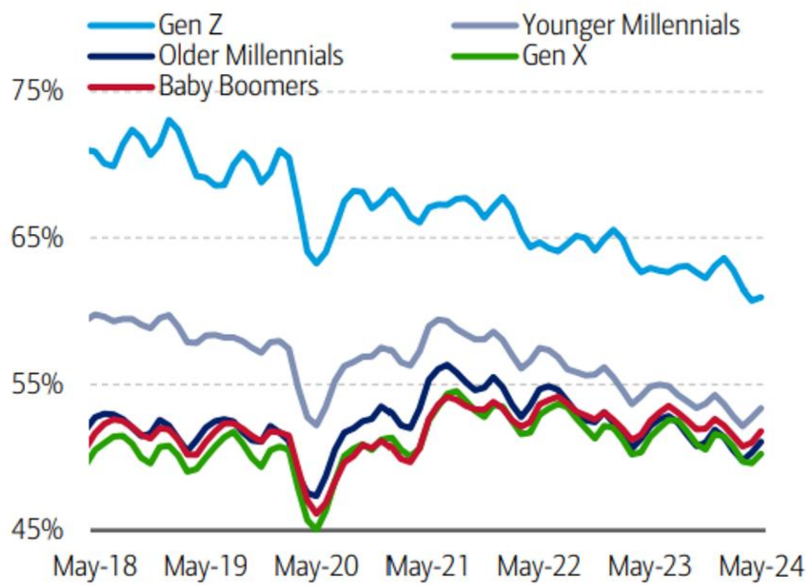
- State of the Consumer
- Credit Card
- Personal Loan
- Auto
- Student Loan
- Mortgage

Soft spending: While consumer spending was slightly up in Q2, overall spending is down YoY, especially for discretionary purchases

BoA Credit and Debit Spending per Household, YoY Change



Discretionary Spending as % of Total Spending, by Generation



3-month moving average

Generational gaps: ***Indicators of stress among younger borrowers are growing***

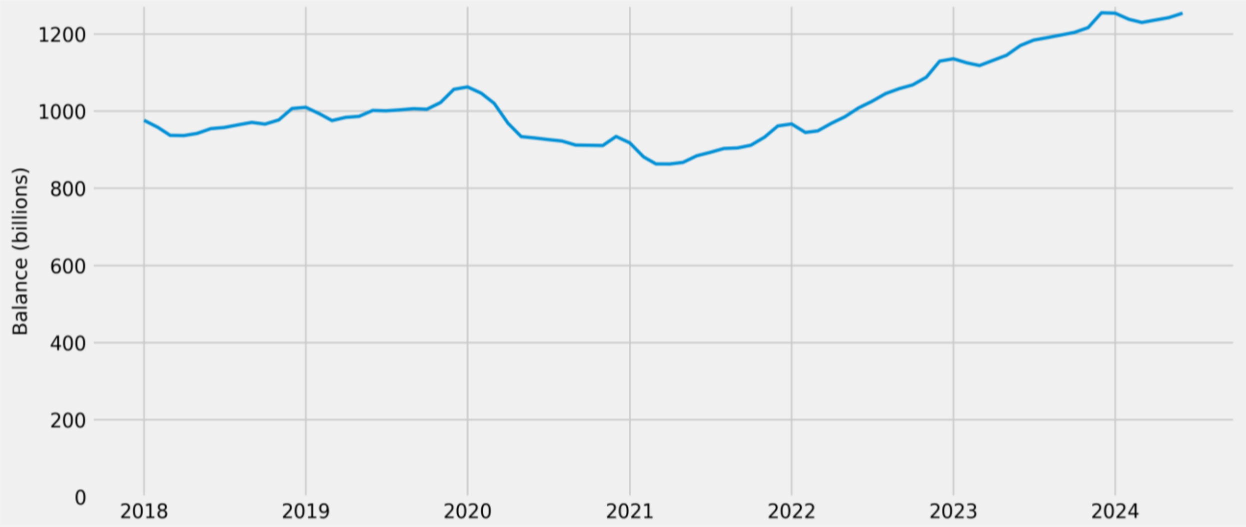
The proportion of Millennial and Gen Z borrowers whose banking **outflows are more than 5% greater than their deposit inflows has been growing** since the pandemic, and now is above 20% for both groups. Moreover, Gen Z now has **repayment rates nearing only 75% of their 2019 average.**

As seen above, while younger Millennials and Gen Z borrowers still have **higher proportions of discretionary spending** than older cohorts, **the gap has continued narrowing** since the pandemic. This result alone does not prove increased financial stress among younger borrowers but is potentially the result of a **combination of lifecycle effects and macroeconomic stressors such as the rising cost of necessities.**

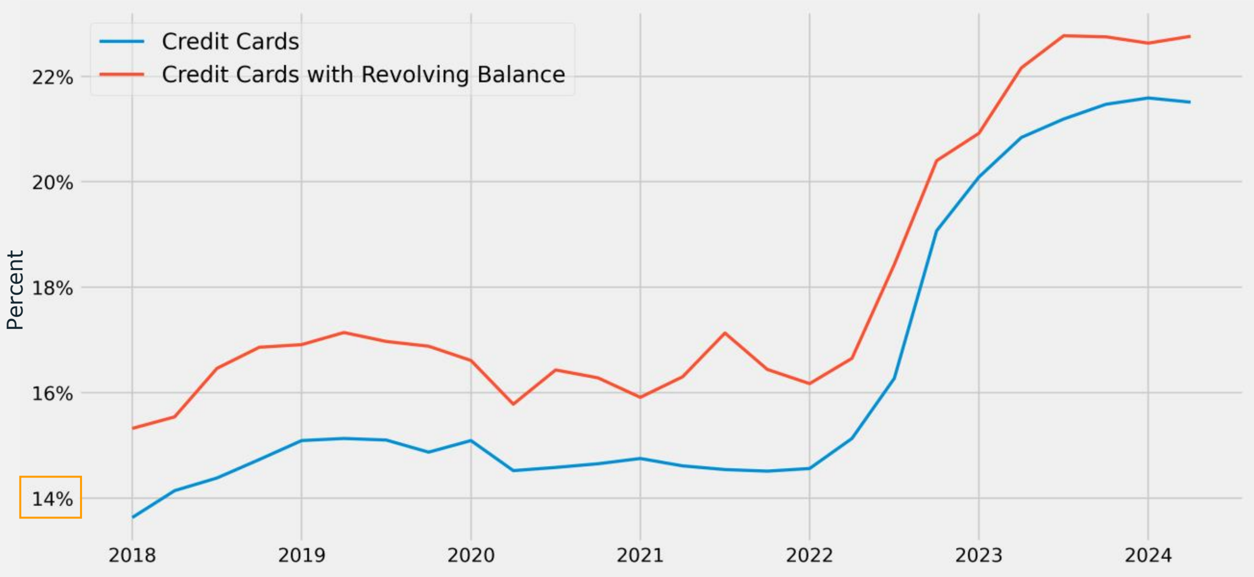
Left: BoA Consumer Checkpoint June 2024. Right: BoA Consumer Checkpoint July 2024

Credit card debt growth: With record-high APRs, consumer credit card debt is mounting

Credit Card Outstanding Dollars



Credit Card Average APRs



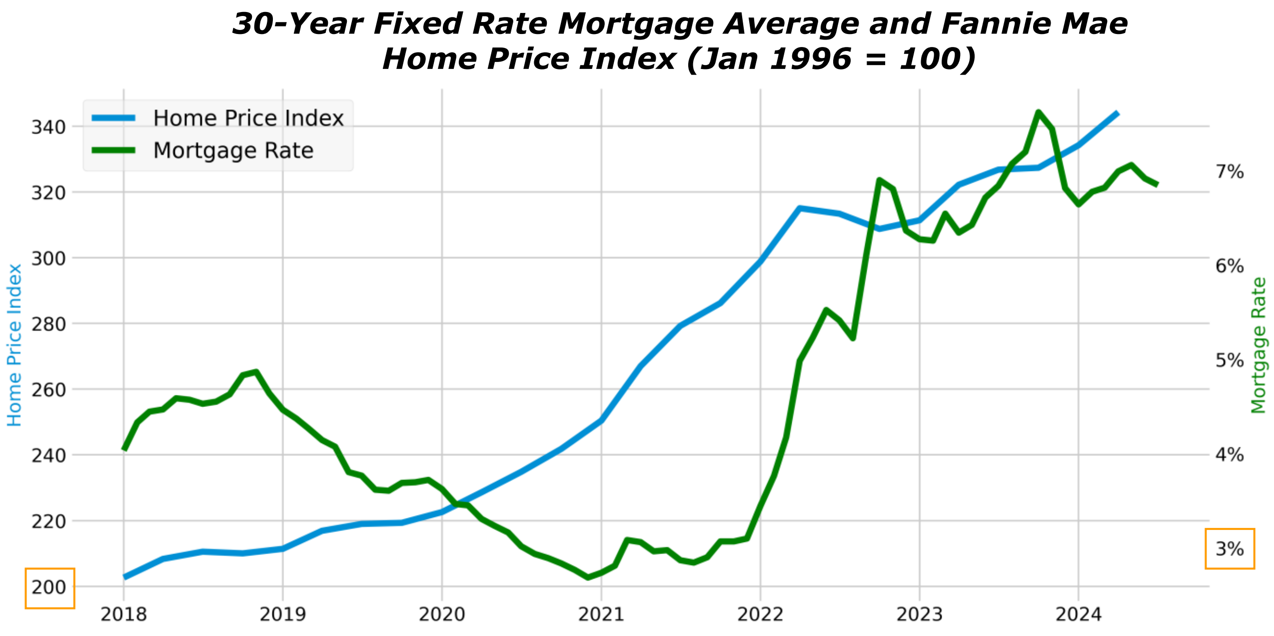
Late fees and APRs:
Case study with Synchrony Financial

In response to the March 2024 CFPB rule which caps credit card late fees at $8 in most cases, Synchrony Financial has raised both regular APR and penalty APR on some of its products such as the TJ Maxx and Walmart partnership cards.

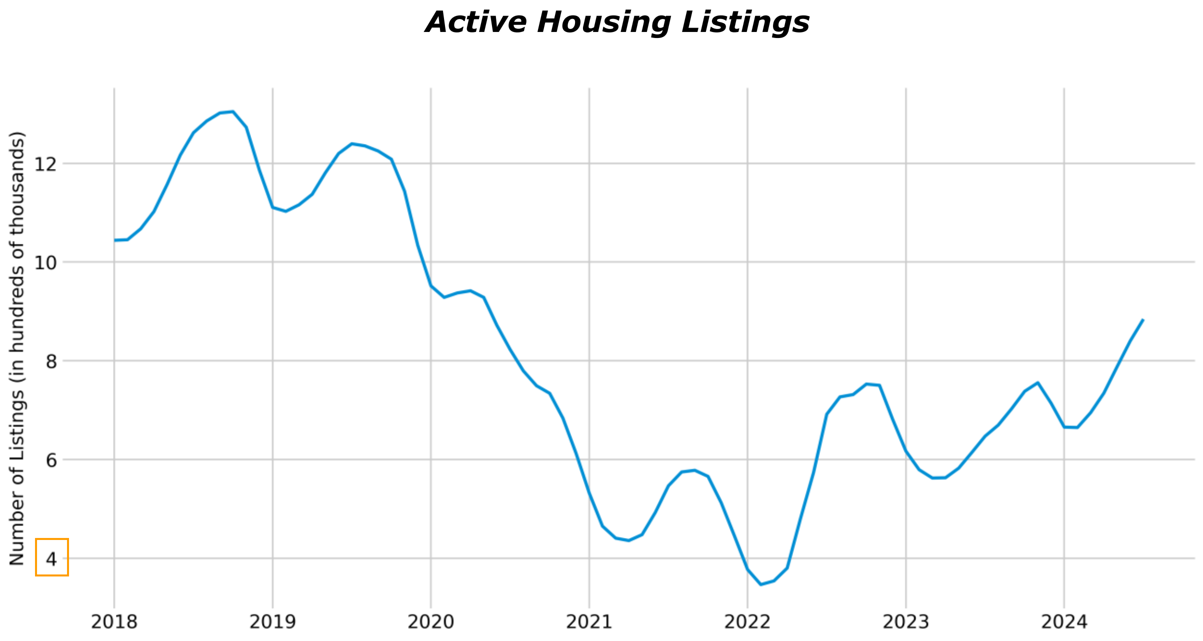
"Our goal from the beginning has been to protect our partners and continue to provide credit to the customers that we do today. And unfortunately, that's impossible to do without these offsets."
- Synchrony Financial CEO Brian Doubles

Left: 2OS, Equifax Ignite. Data as of June 30th, 2024. Right: Federal Reserve G.19 July 2024 report. Case study: American Banker

Stagnant housing market: While the mortgage lock-in effect may be easing, high prices and high mortgage rates have kept the housing market slow



The average mortgage rate for Q2 was 6.99%, up 24bps from Q1 average but still ***down from its peak in Q4 2023 by 30bps.*** *Home prices rose* ***6.9% YoY*** *in Q2.*



Listings rebounded in Q2 while existing home sales decreased 2.8% YoY in May and new home sales decreased 7.4% YoY in July

Understanding the mortgage lock-in phenomenon

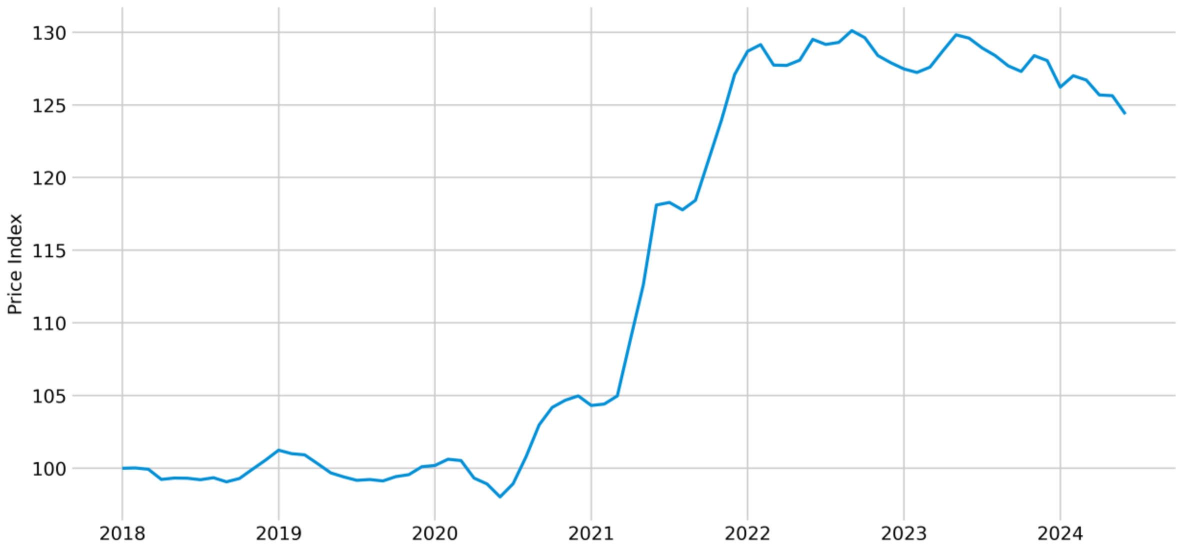
The mortgage lock-in phenomenon reflects the **reluctance of homeowners who secured low-interest mortgages to sell their homes in the newer, higher interest rate environment**. The lock-in effect had been strong since 2022, when average mortgage rates hovered around 3.9% but new mortgage rates climbed over 6%. In early 2022, the volume of listings dropped to a mere 34% of the 2018 level.

However, the effect now appears to be fading. The Q2 2024 Fannie Mae Home Price Expectations Survey found that **84% of experts believe that the lock-in effect is diminishing,** and YoY increases of listings for existing homes will continue through 2024.

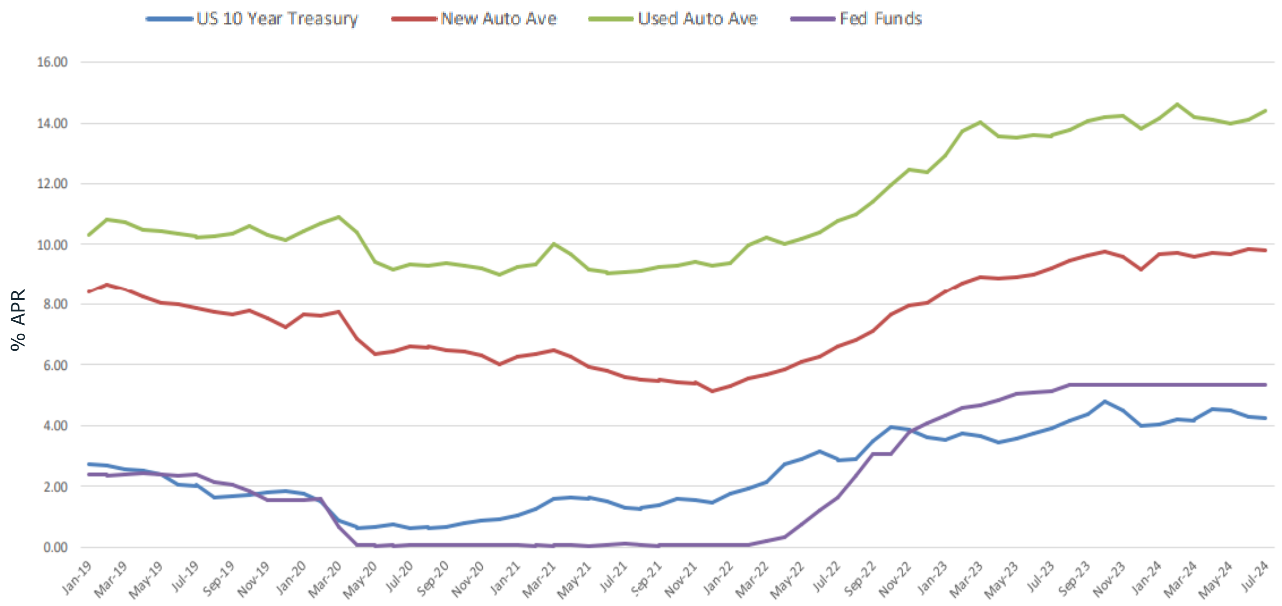
Left: Q2 2024 Fannie Mae Home Price Index (FNM-HPI). Right: Federal Reserve data , MBA, US Census Bureau. Case study: Redfin research and Fannie Mae Survey

Rising necessity costs: Similarly to the housing market, automotive prices and loan rates remain high despite inflation slowing

New and Used Vehicle Consumer Price Index



Cox Automotive Auto Loan Rates



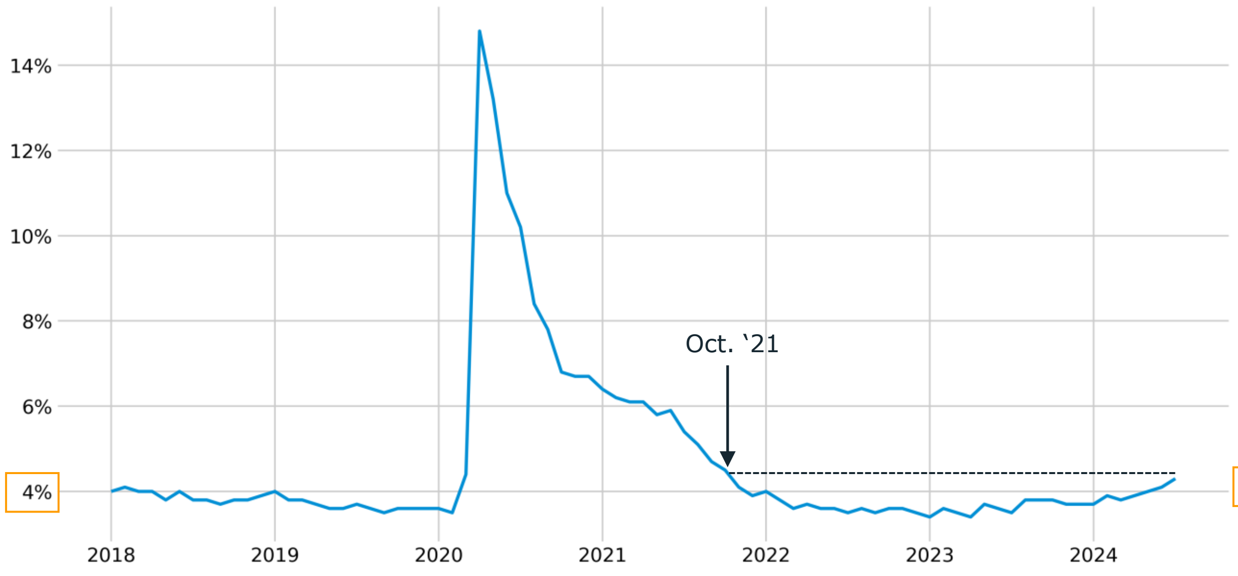
*While new and used auto prices have continued dropping this quarter, the overall price index is still up **over 24% from pre-pandemic** (January 2018 index) averages*

Used auto loan APR remains above 14%
while new auto loan APR stays just under 10%

Left: Federal Reserve data. Right: Cox Automotive, citing FRB, Dealertrack, and Bloomberg

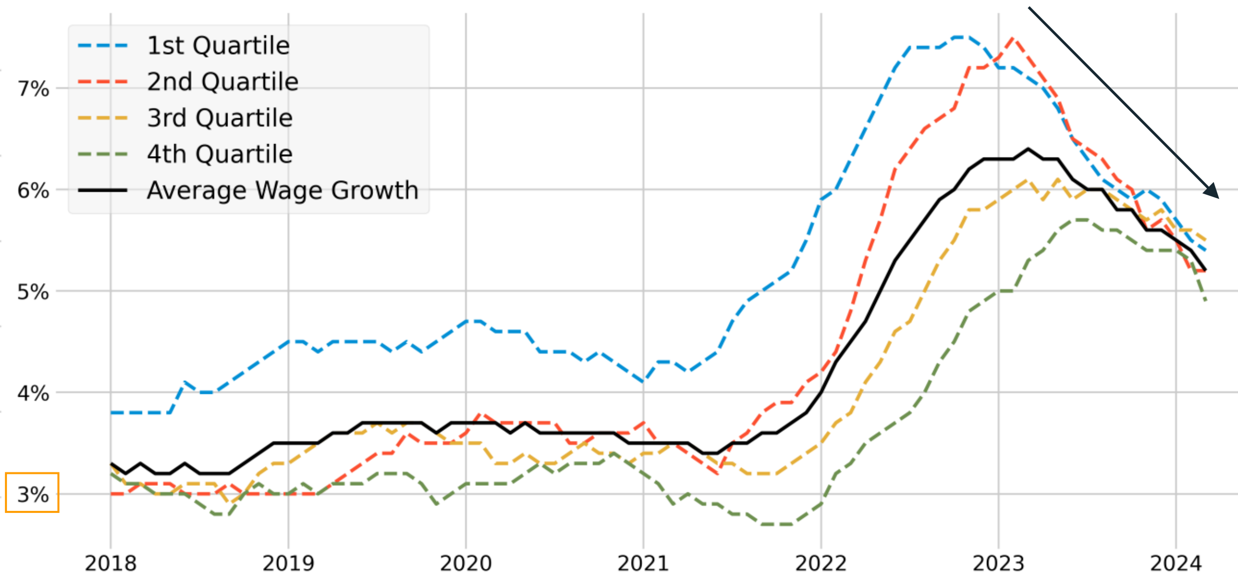
Labor market softening: A steady labor market had kept marginal borrowers afloat with robust salary growth, but the growth rate is slowing and unemployment is rising

Unemployment Rate



Unemployment rate, seasonally adjusted

Median Salary Growth by Income Band



% YoY, 12-month moving average.
1st quartile = lowest quartile of wage distribution

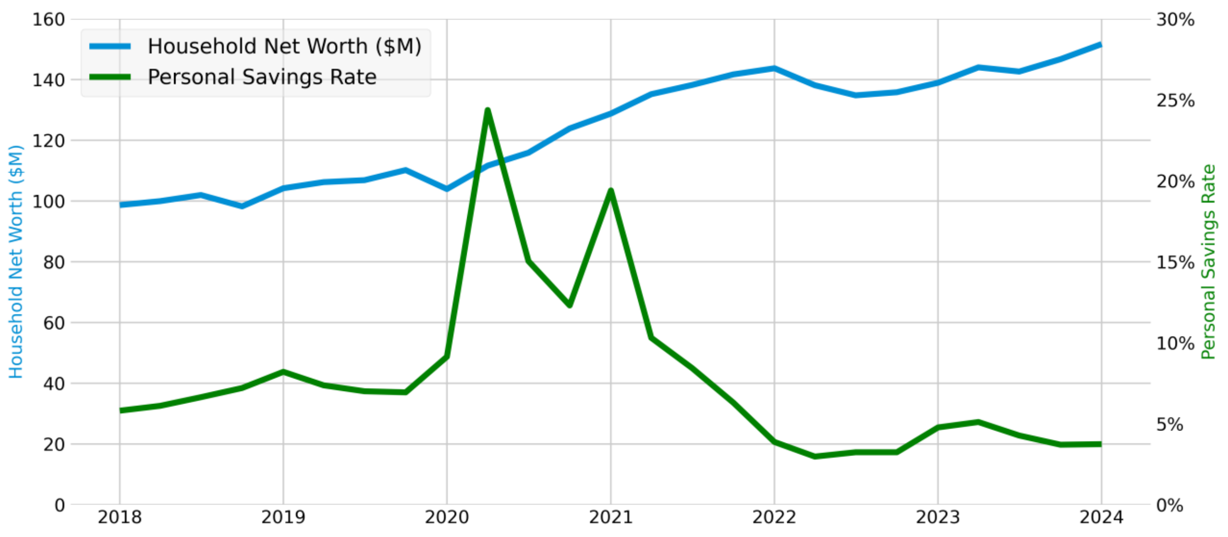
***Unemployment reached a nearly 3-year high** of 4.3% in July*

*While wage growth has slowed overall since 2023, **lower-income households had benefitted from more buoyant wage growth** than their higher-income counterparts; however, the gap is now narrowing*

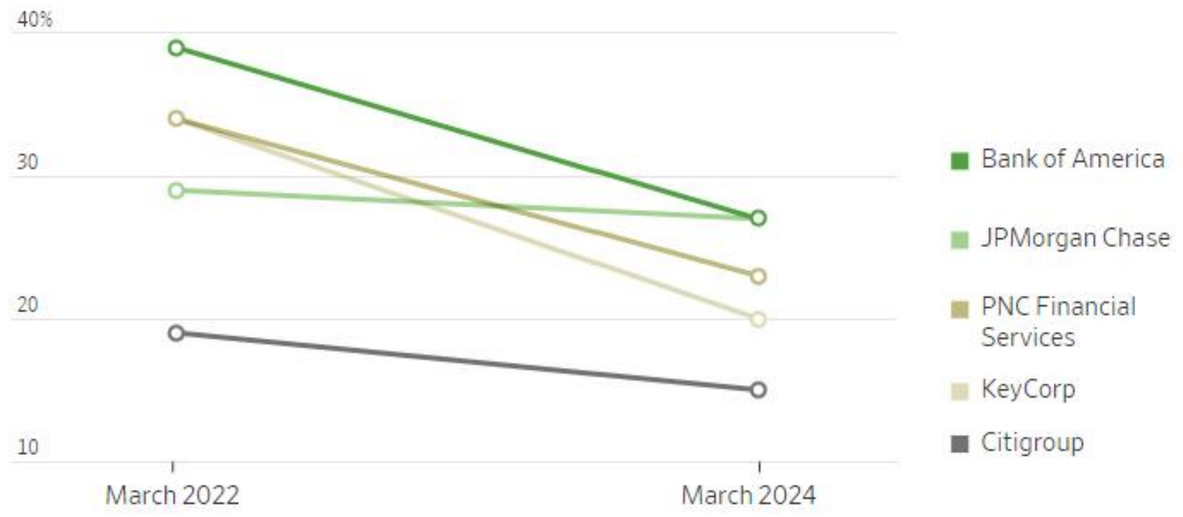
Left: Federal Reserve data. Right: Atlanta Fed

Household wealth a mixed bag: While overall savings rates are still down from pre-pandemic levels, household wealth continues its upward trend

Personal Savings Rate and Household Wealth



Noninterest-bearing Deposits as Percent of Total Deposits



Mixed signals on consumer liquidity and savings behaviors

"[H]igher FICO score customers… are driving the spend growth and… continued strong balances and savings… [While] lower FICO band customers… [have a] sharper drop in payment rates and more borrowing"
- CFO Mark Mason

"Customer migration to higher-yielding alternatives was… lower in the [2nd] quarter"
-CFO Mike Santomassimo

Left: Federal Reserve data. Right: Wall Street Journal, citing Moody's Ratings. Quotes: Reuters

- State of the Consumer
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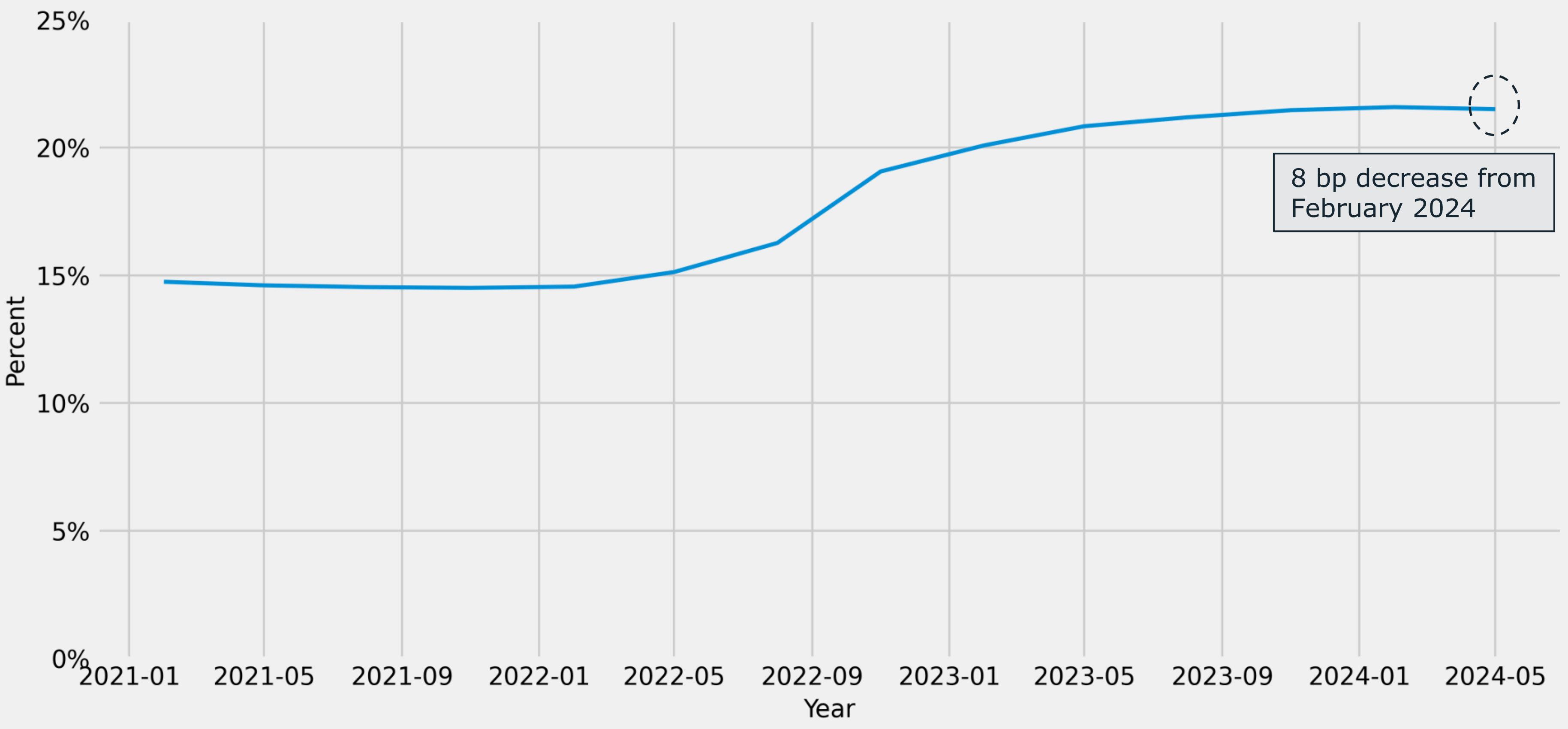
Average credit card interest **rates have been on the rise** and reached a peak in February at 21.59%

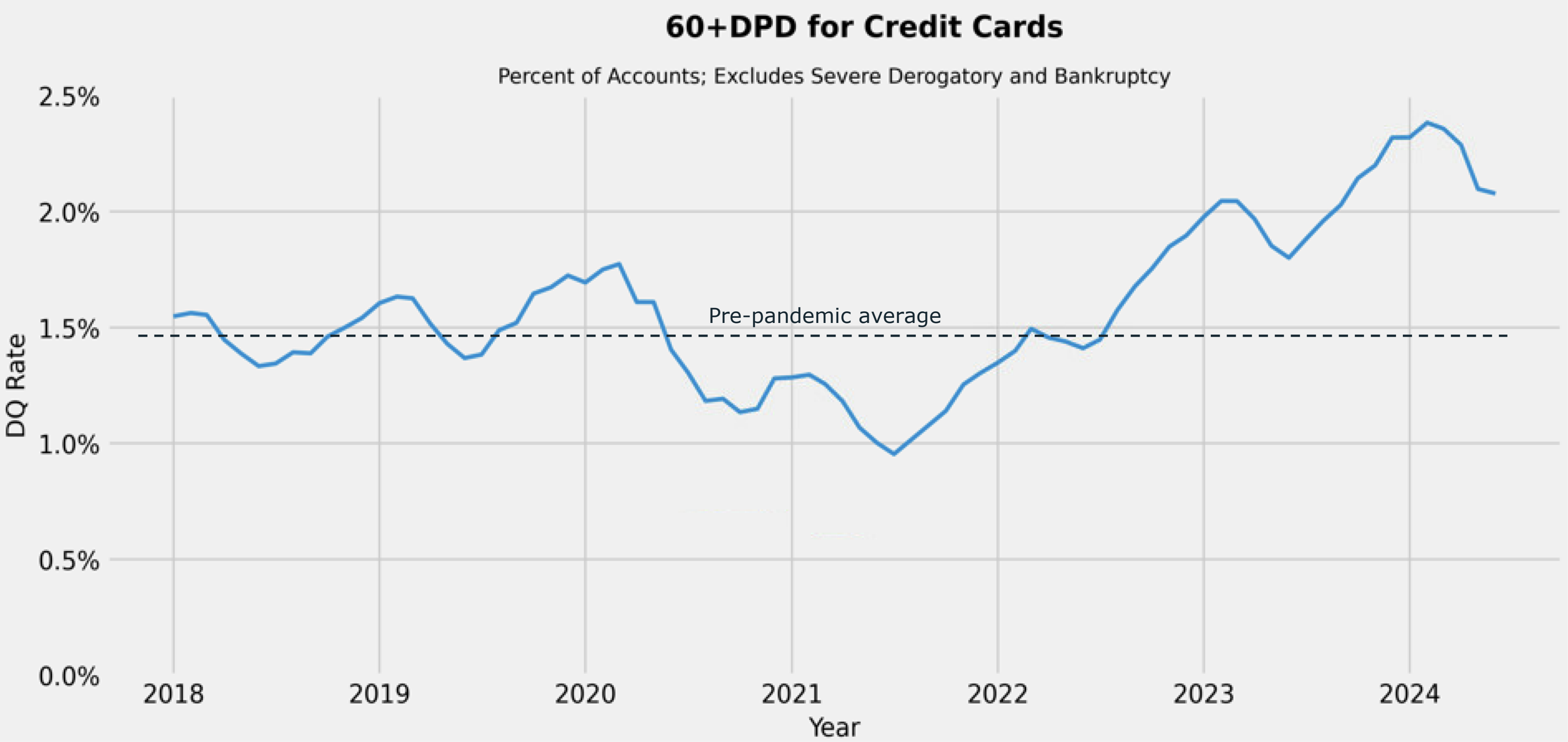
As banks anticipate the effects of new late fee regulation, interest rates may continue to rise

Commercial Bank Interest Rate on Credit Card Plans, All Accounts



Source: Federal Reserve data

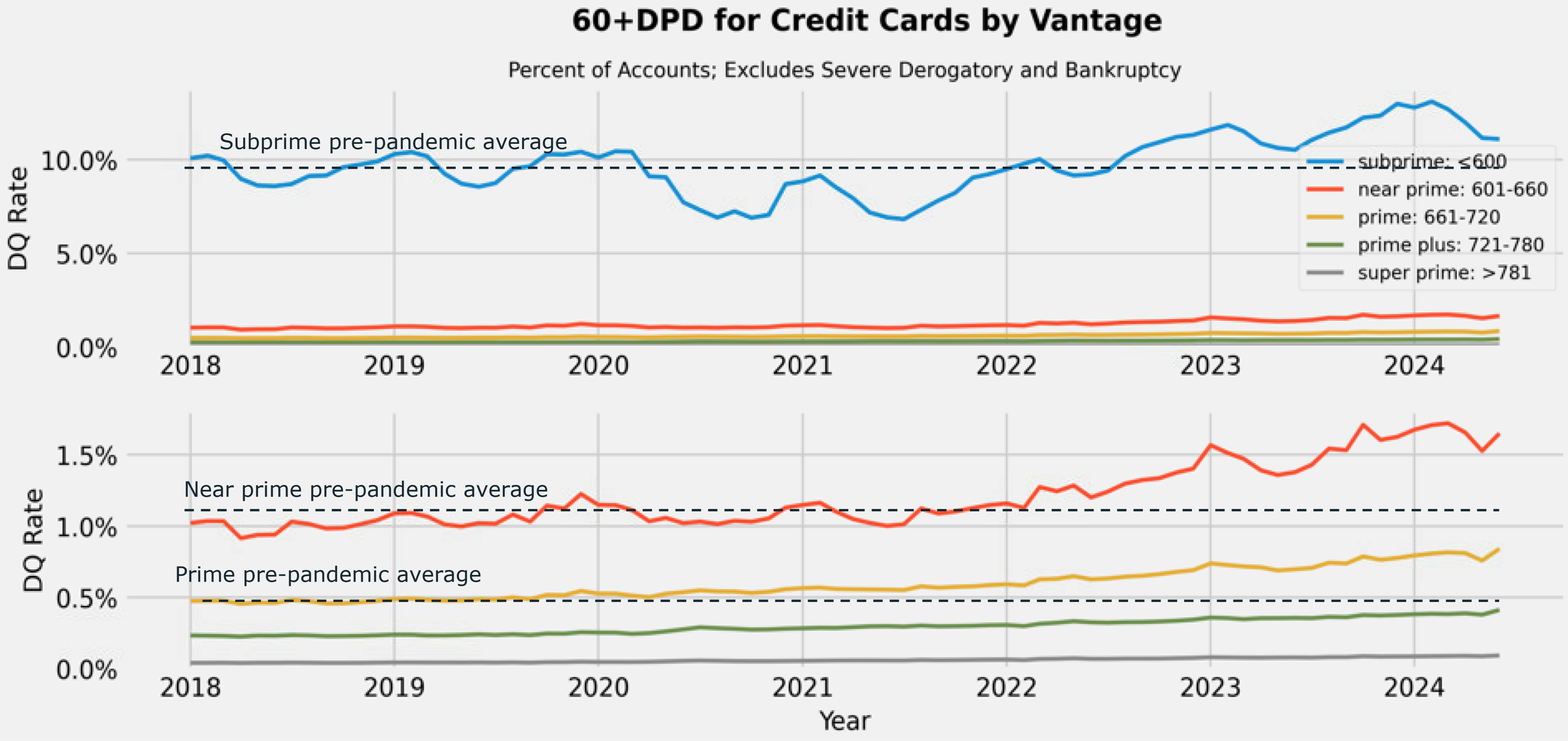
Overall delinquency is well above pre-pandemic levels with recent months showing a slight drop in line with seasonality



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

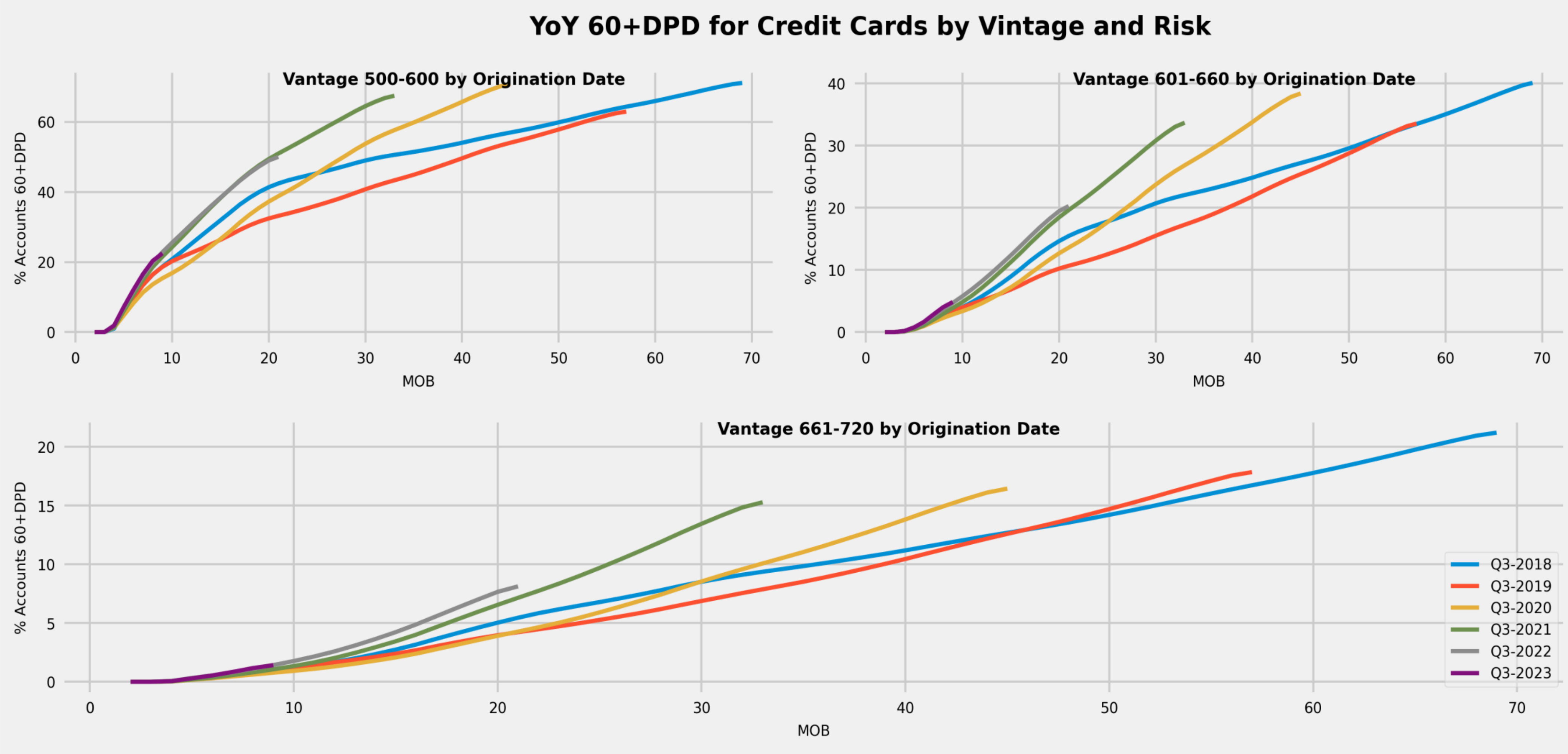
Delinquency rates within risk bands are **mixed in trend for the recent quarter**

Subprime flattened while other risk groups experienced slight upticks in recent months



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

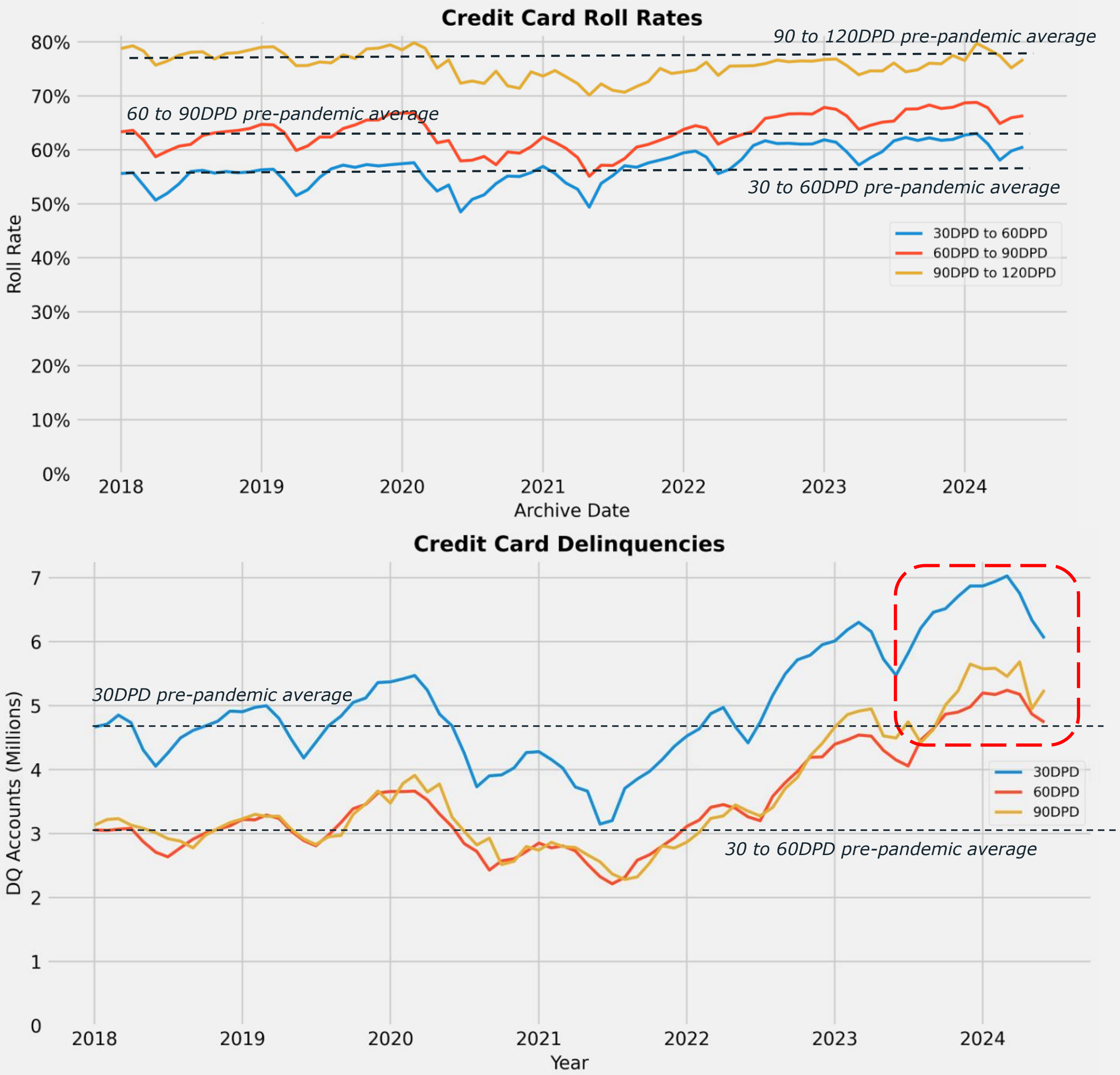
Recent vintage performance aligns with previous years' patterns across all risk buckets



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024. DQ rates for vintage performance are cumulative

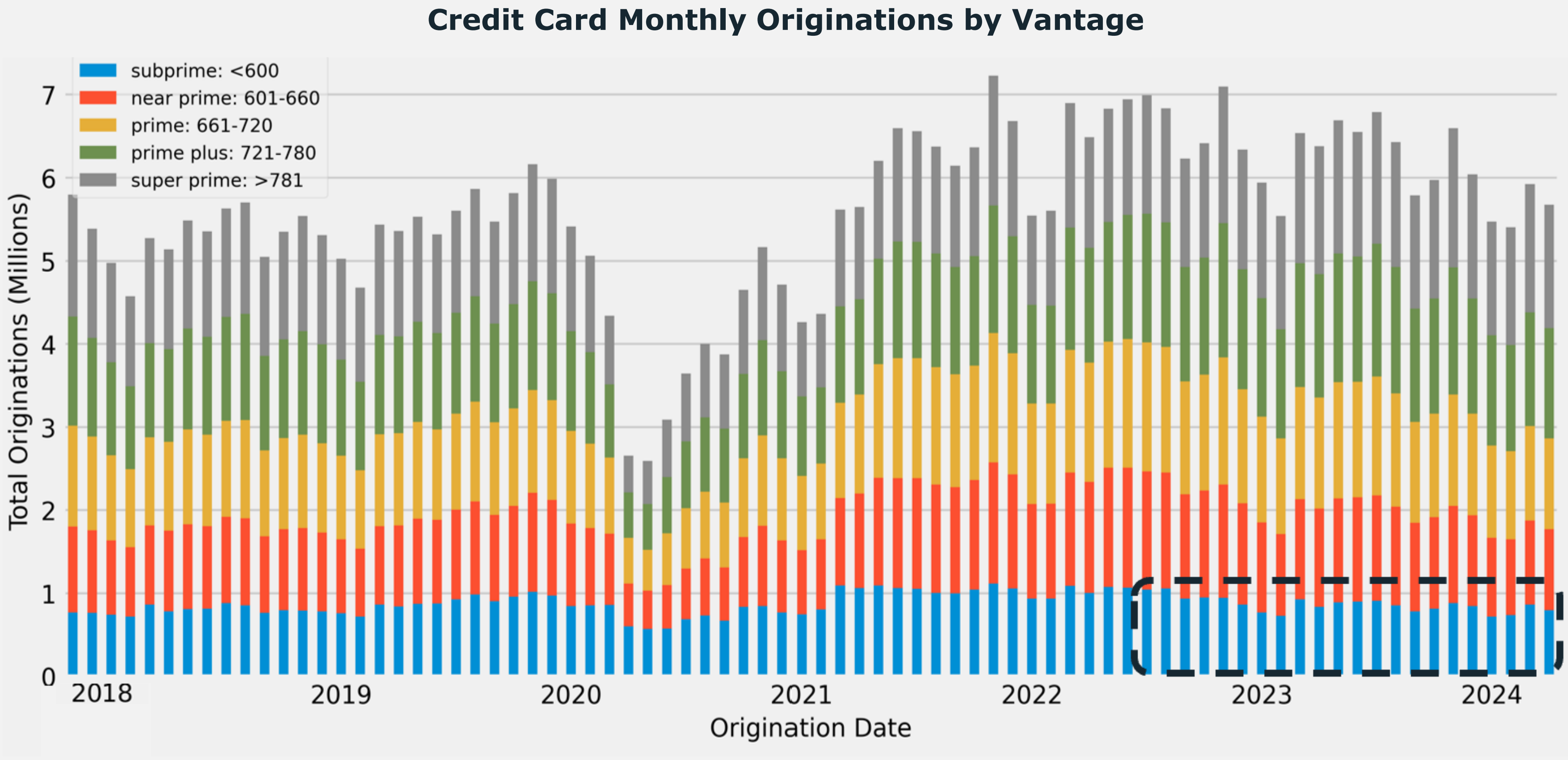
Early-stage delinquency is above pre-pandemic averages with **recent quarters showing slight upticks**

Number of delinquent accounts remains high, but the recent quarter shows reductions in line with seasonality



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

Credit card issuers continue to **tighten subprime originations** compared to 2022 levels

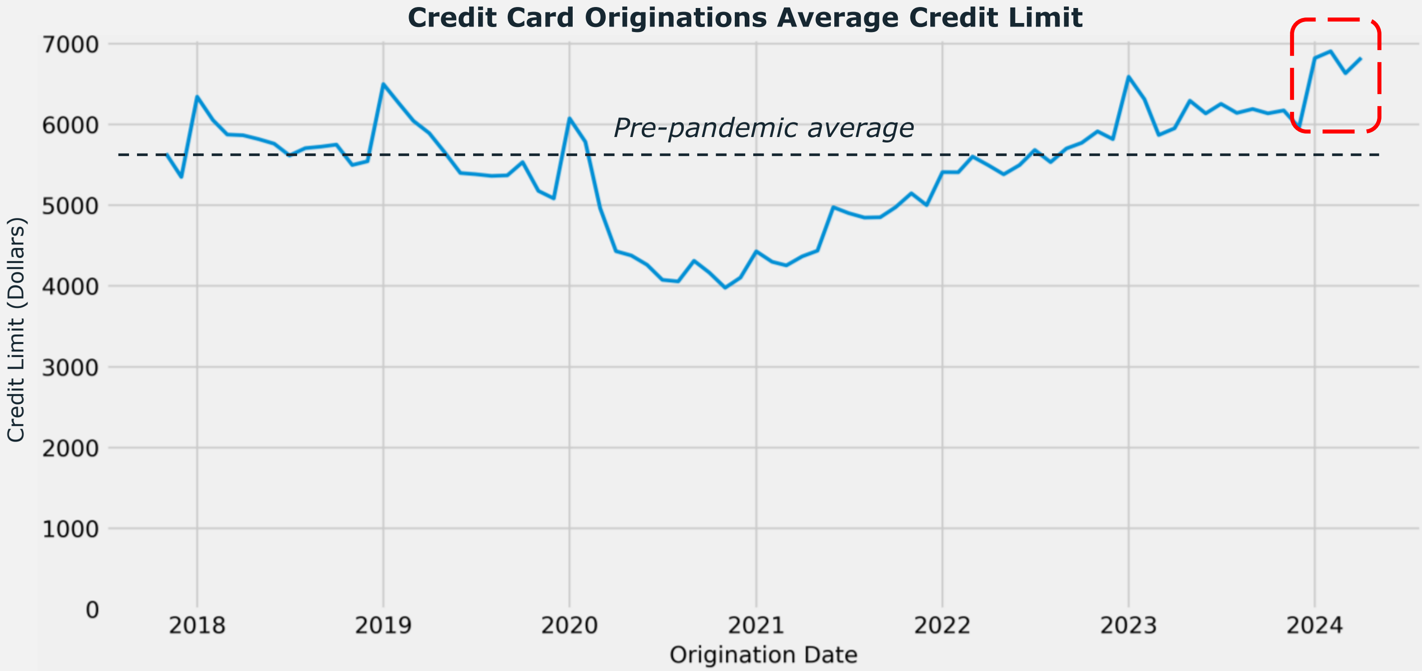


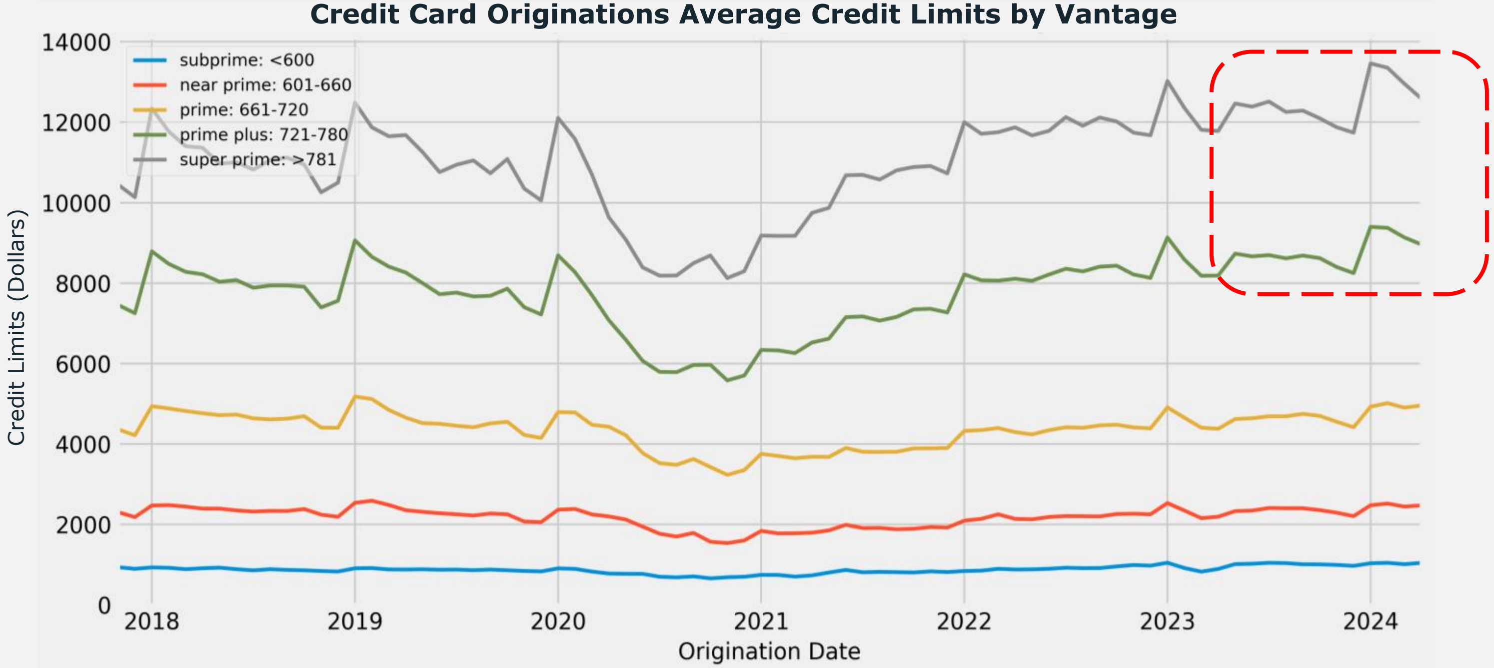
Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

CC Originations

While average credit limit is trending upwards and remains above pre-pandemic levels, this appears to be due to an increasingly prime origination distribution

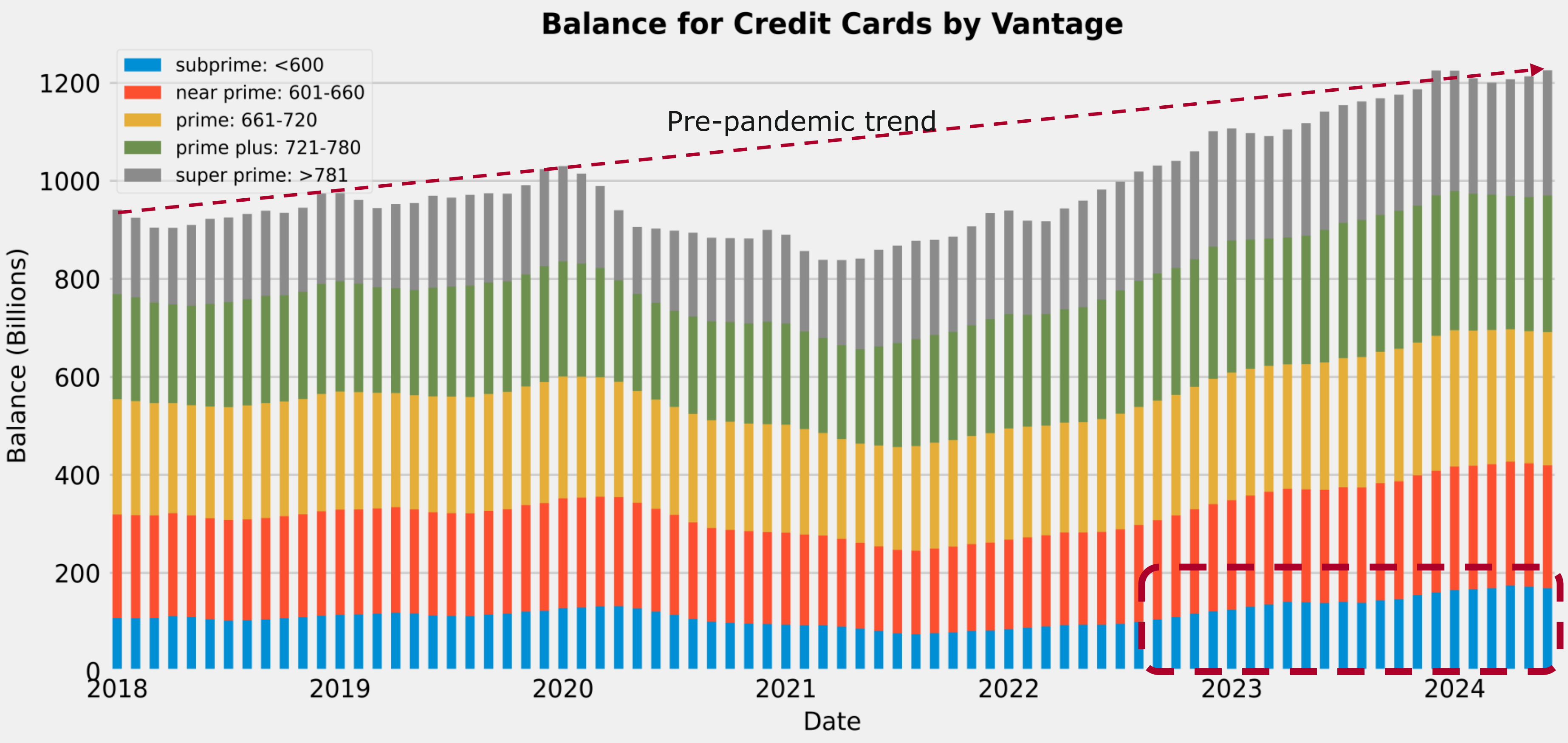
Within each Vantage band, average credit limits are up YoY but have decreased or remained stable over the last two quarters





Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

Credit card **balance for subprime continues to increase** despite tightened underwriting



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

2nd Order solutions

- State of the Consumer
- Credit Card
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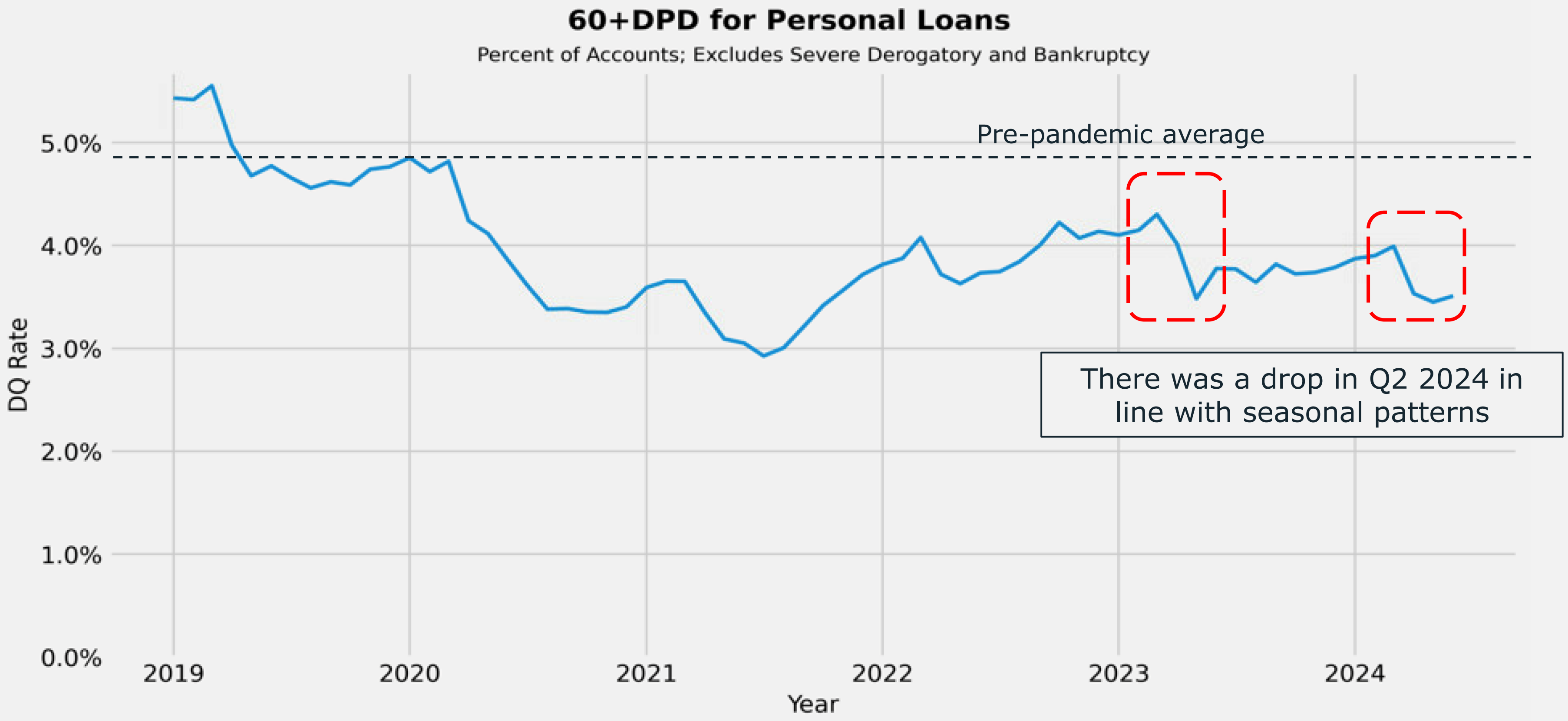
Personal loan delinquencies remain **well below pre-pandemic averages**

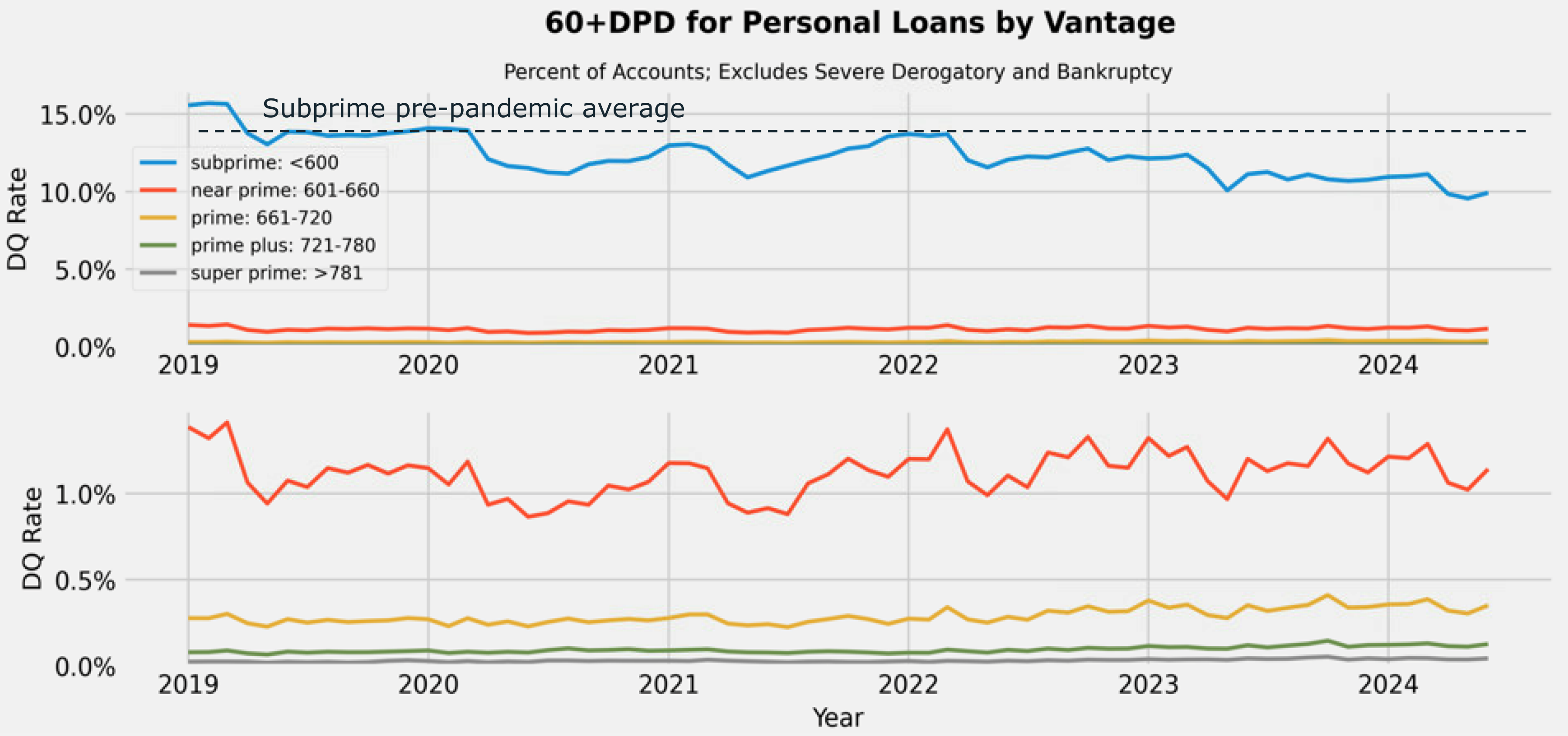
Delinquencies are below late 2022 levels, likely due to tightening in originations



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

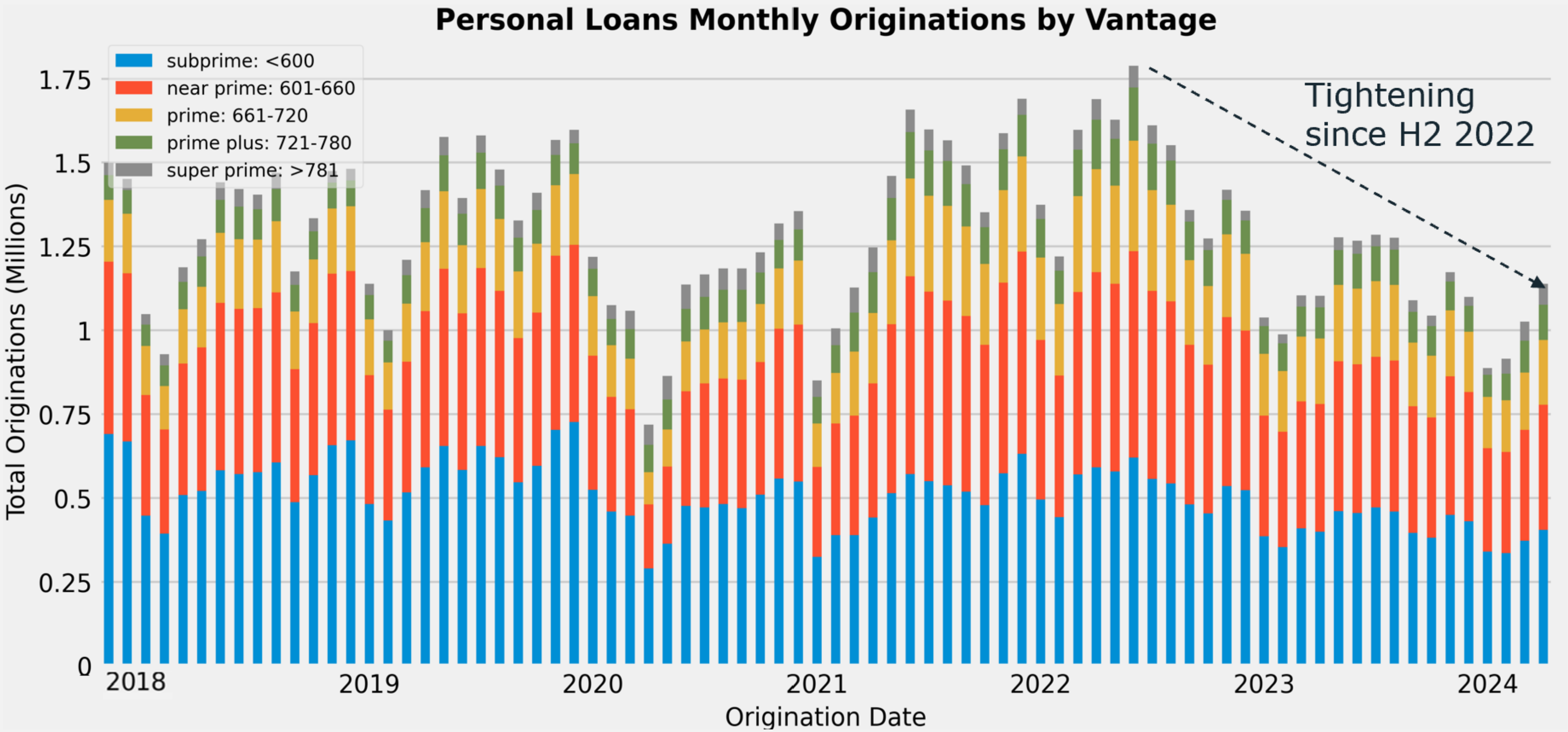
Subprime delinquencies are gradually decreasing and remain under pre-pandemic levels since mid 2022

Q2 2024 saw mixed performance with delinquency upticks in near prime and prime consumers while other groups flattened



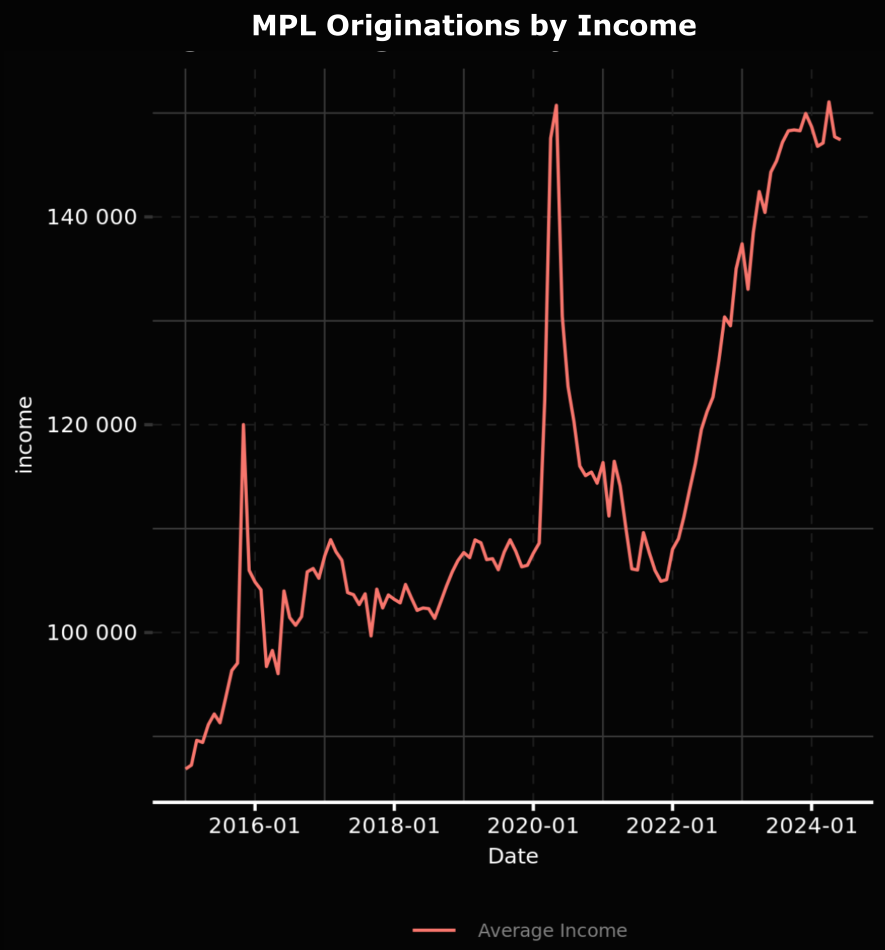
Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

Tight underwriting and high-interest rate market conditions have driven **origination declines** since H2 2022



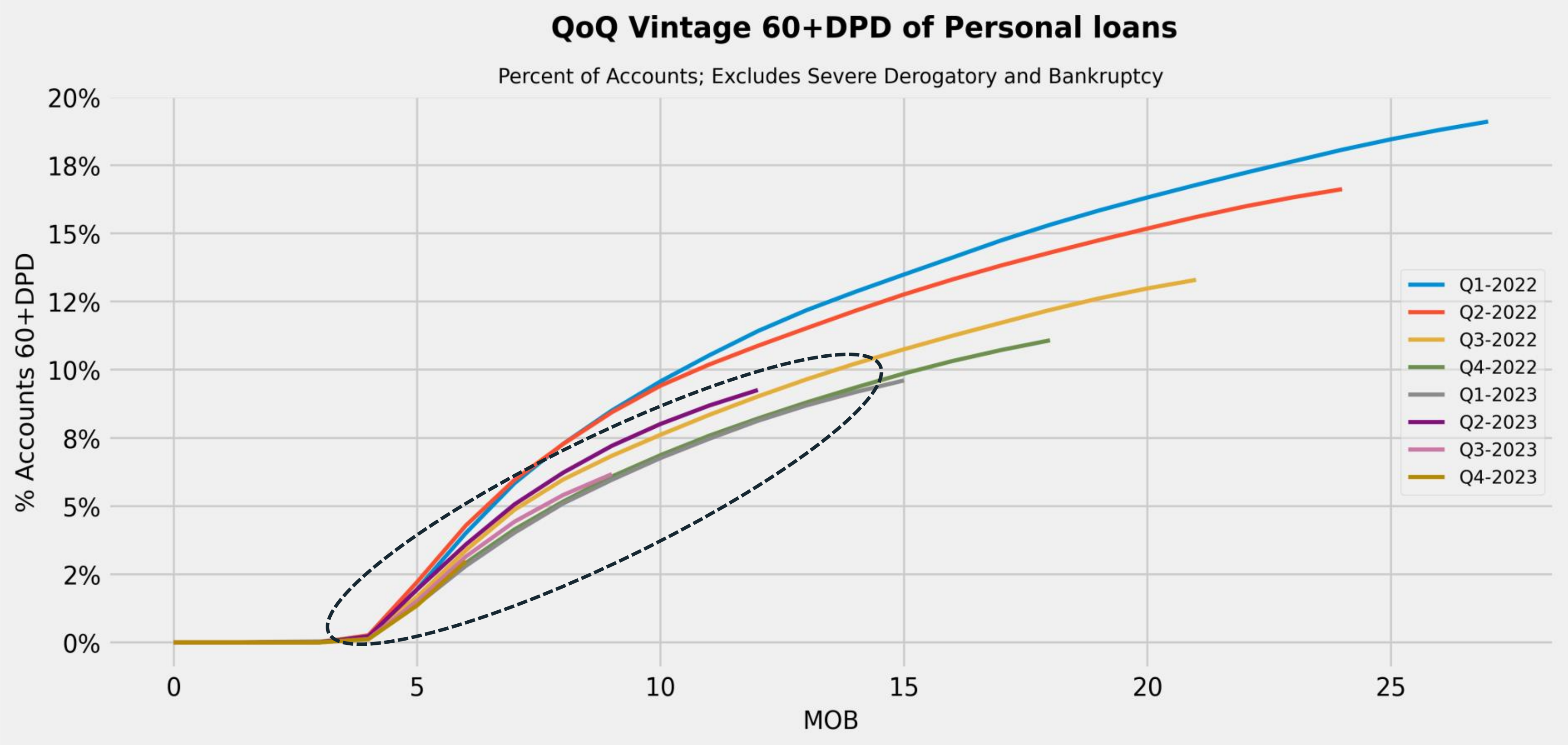
Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

Average FICO and income at origination have been rising since 2022 and remain elevated, but there are signs of potential stabilization in the first two quarters of 2024



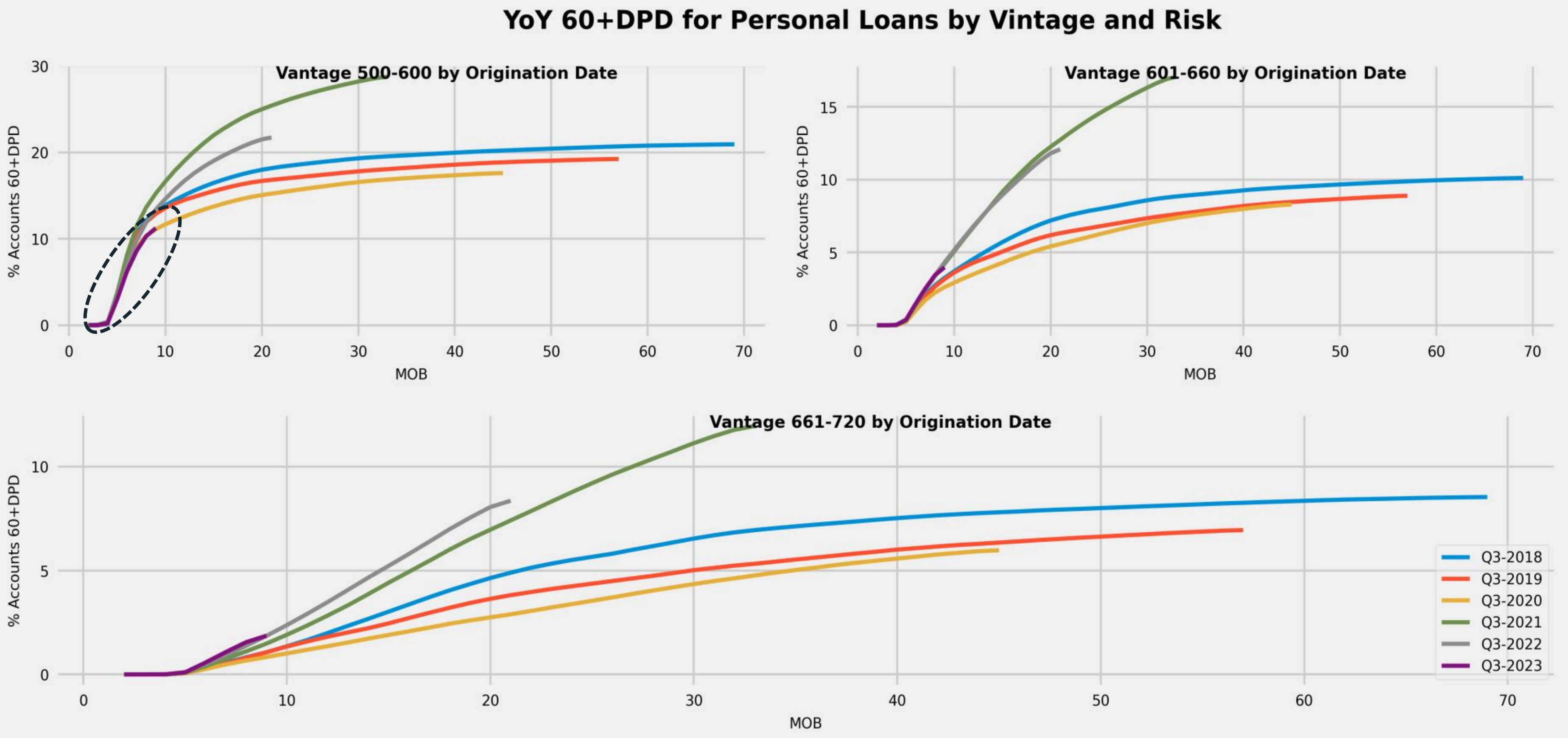
Source: dv01, data as of June 30th, 2024

Vintages after H1 2022 show **strong QoQ performance**, aligning with recent tightening of underwriting standards



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024. DQ rates for vintage performance are cumulative

Recent high-risk vintage originations are **outperforming previous ones** while low-risk groups are performing similarly to previous vintages



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024. DQ rates for vintage performance are cumulative

- State of the Consumer
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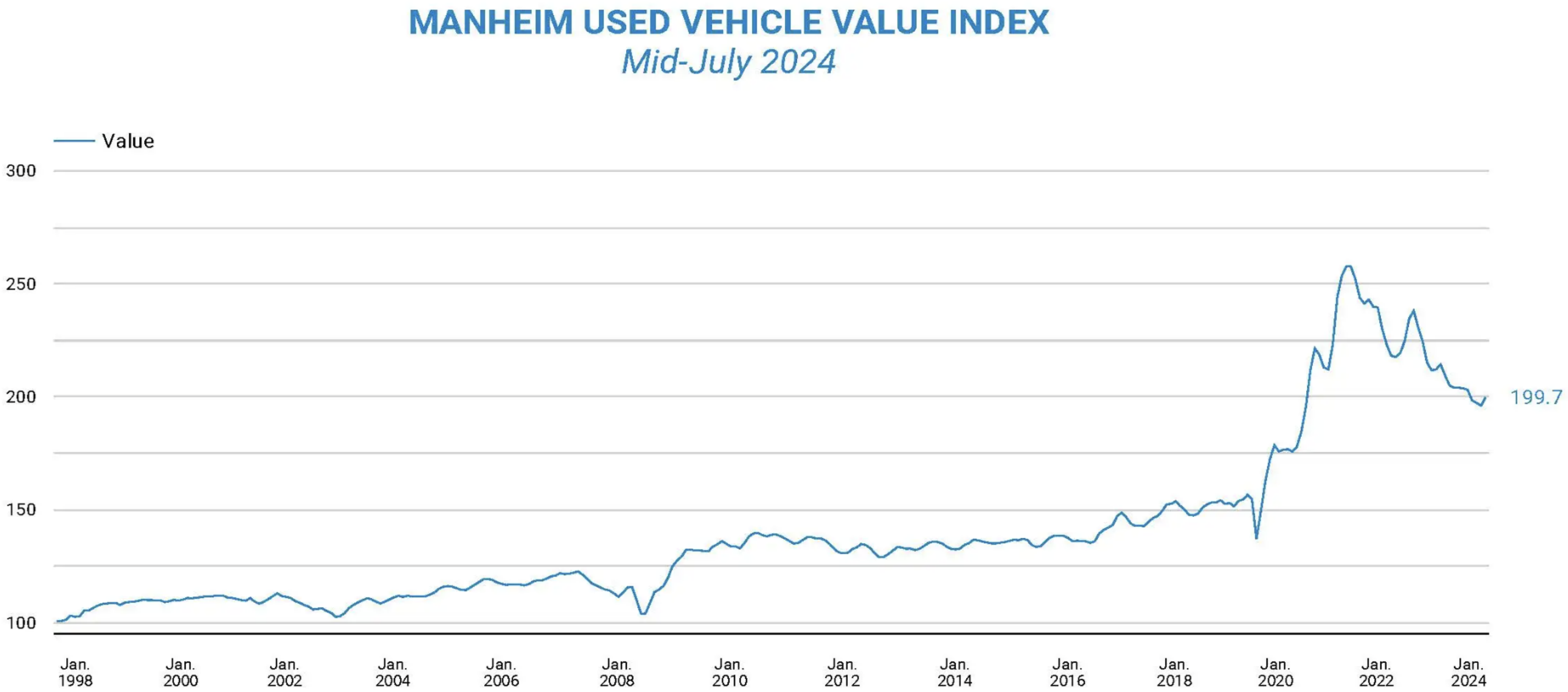
- Personal Loan
- **Auto**
- Student Loan
- Mortgage

Used vehicle prices have been dropping since early 2022; however, they remain elevated relative to pre-pandemic trends

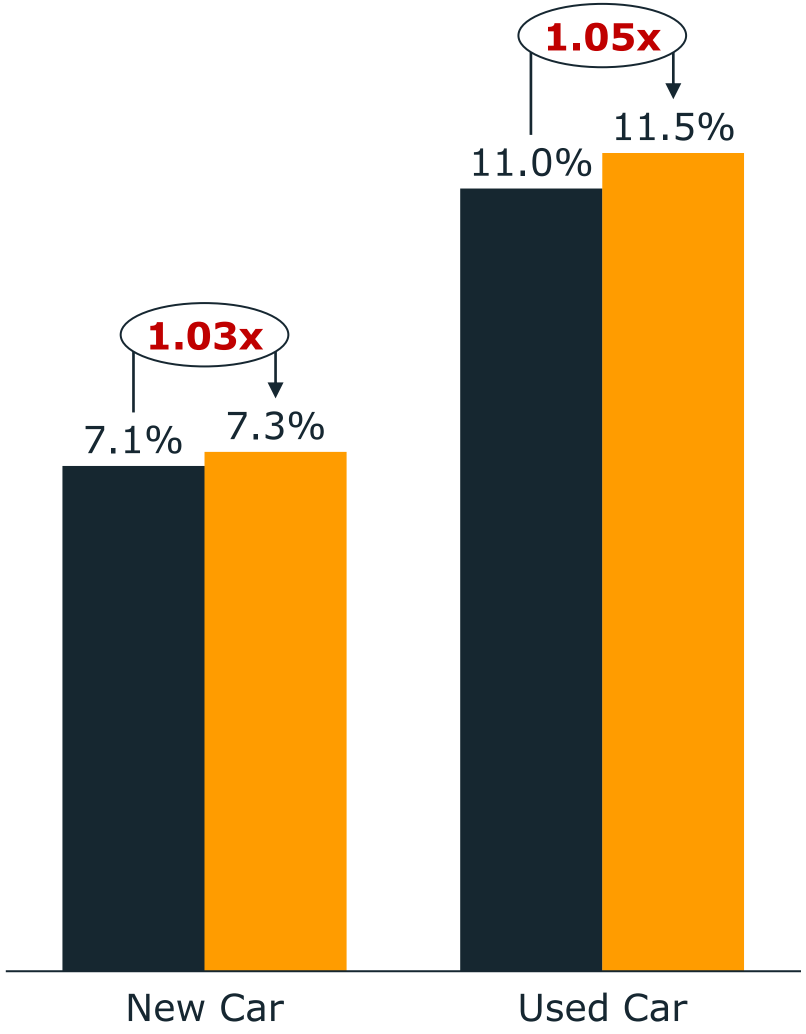


Source: Cox Automotive. Data as of July 15th, 2024

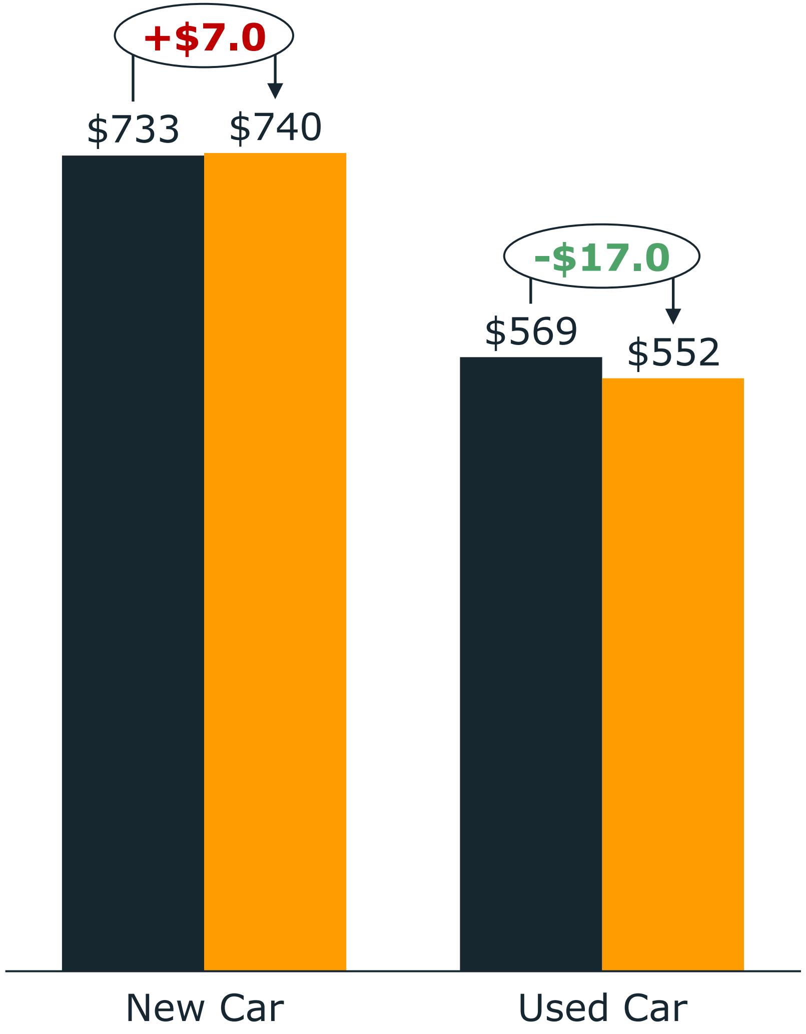
High vehicle prices and borrowing costs pose significant challenges to consumers

New vehicle buyers are particularly stretched with all-time-high monthly payments

Average APR on New and Used Cars



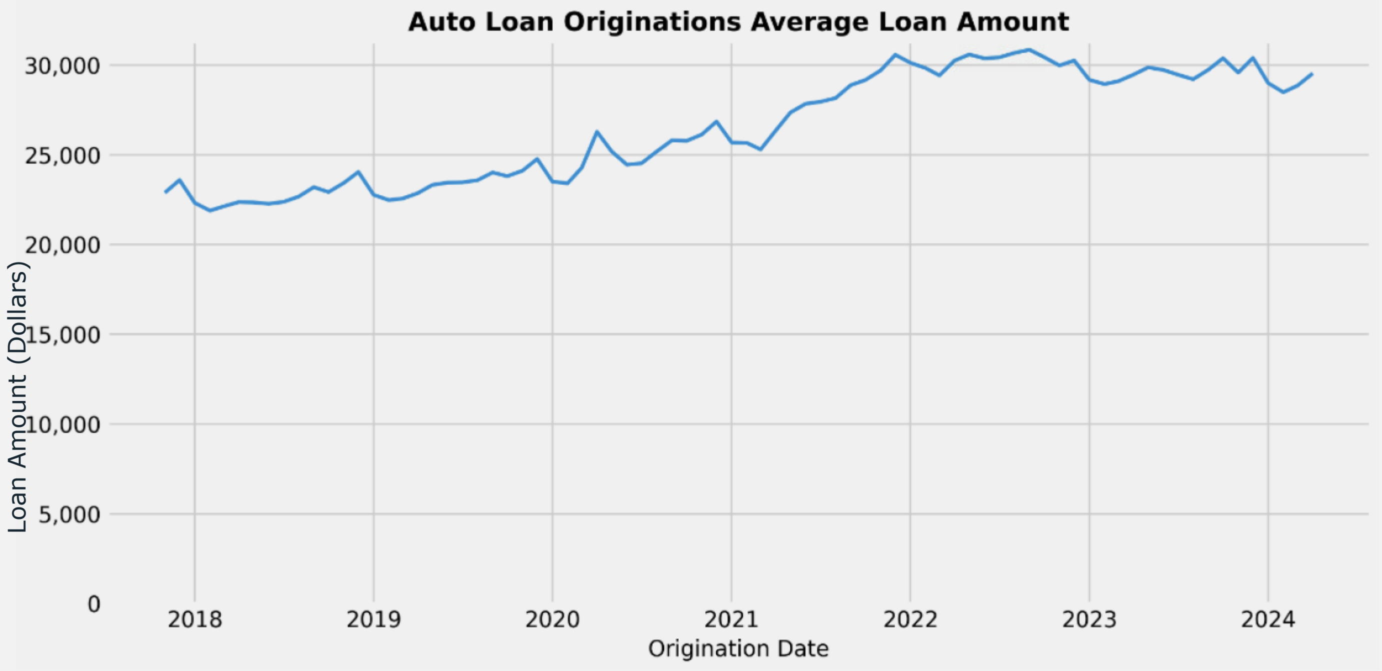
Average Monthly Payment on New and Used cars

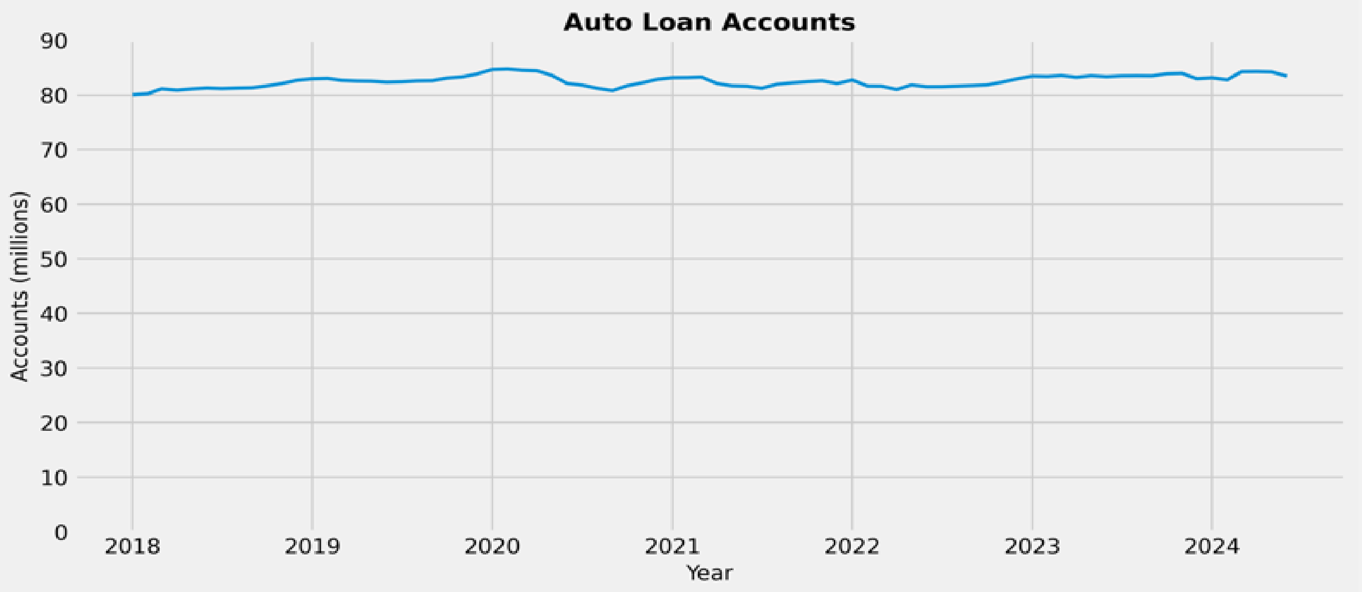


2023 Q2 2024 Q2

Source: Edmunds. Data as of June 30th, 2024

Both auto loan average origination amounts and overall accounts have been **relatively stable since 2022**

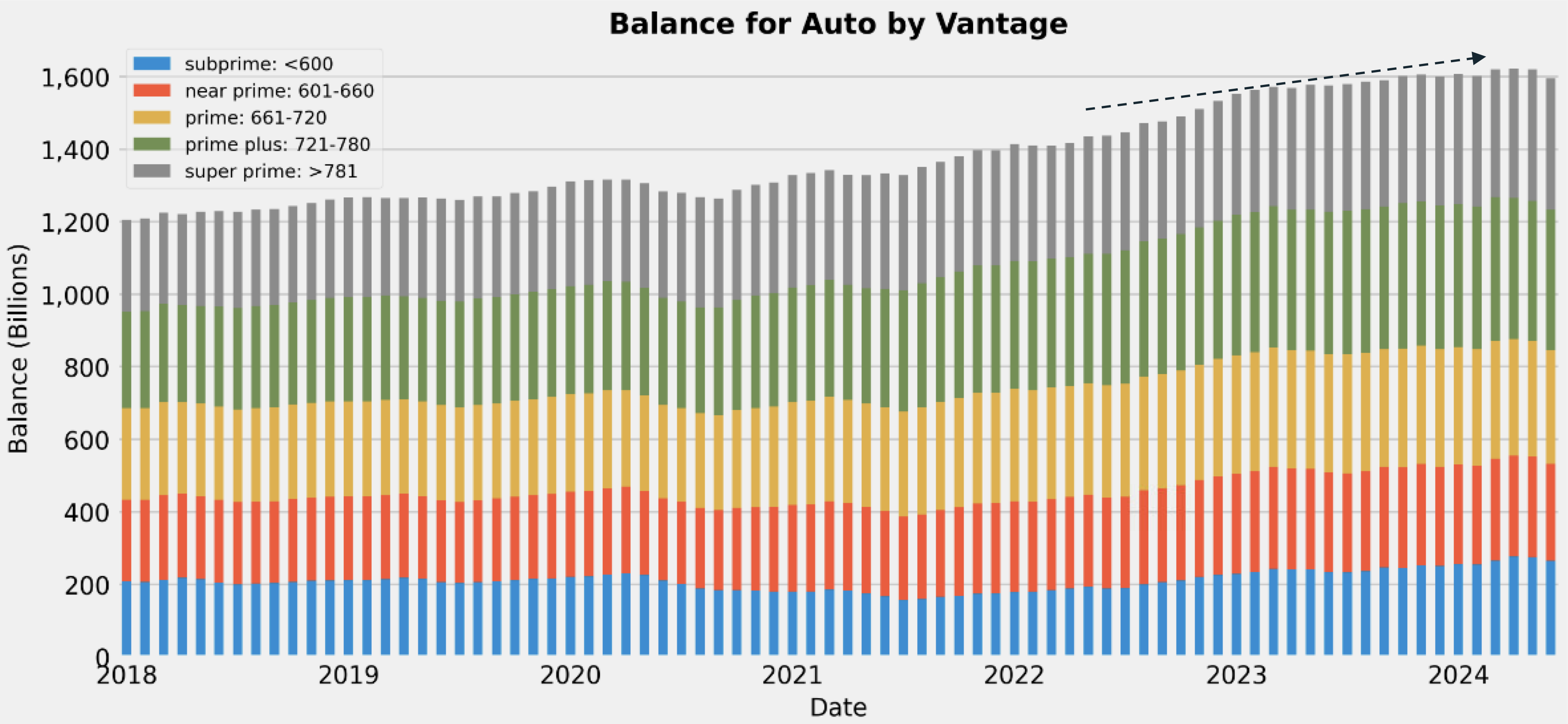




Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

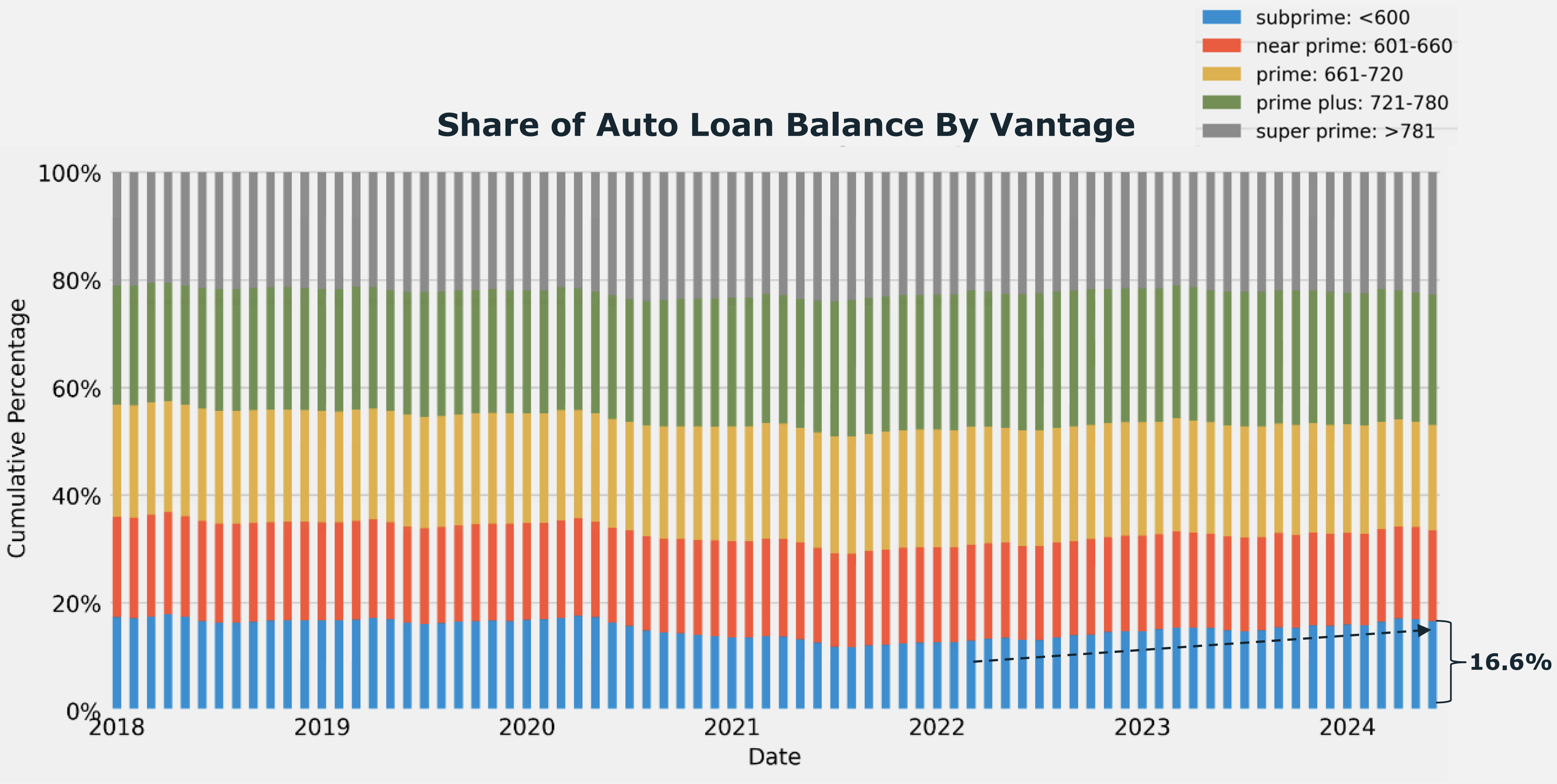
High vehicle prices and interest rates have led to a steady increase in auto-loan balances since the pandemic

June 2024 balances saw a seasonal decrease from May



Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

Subprime share of auto loan balance had been **steadily increasing towards pre-pandemic levels**, but the last few months have seen a dip in balance share for all but above-prime bands

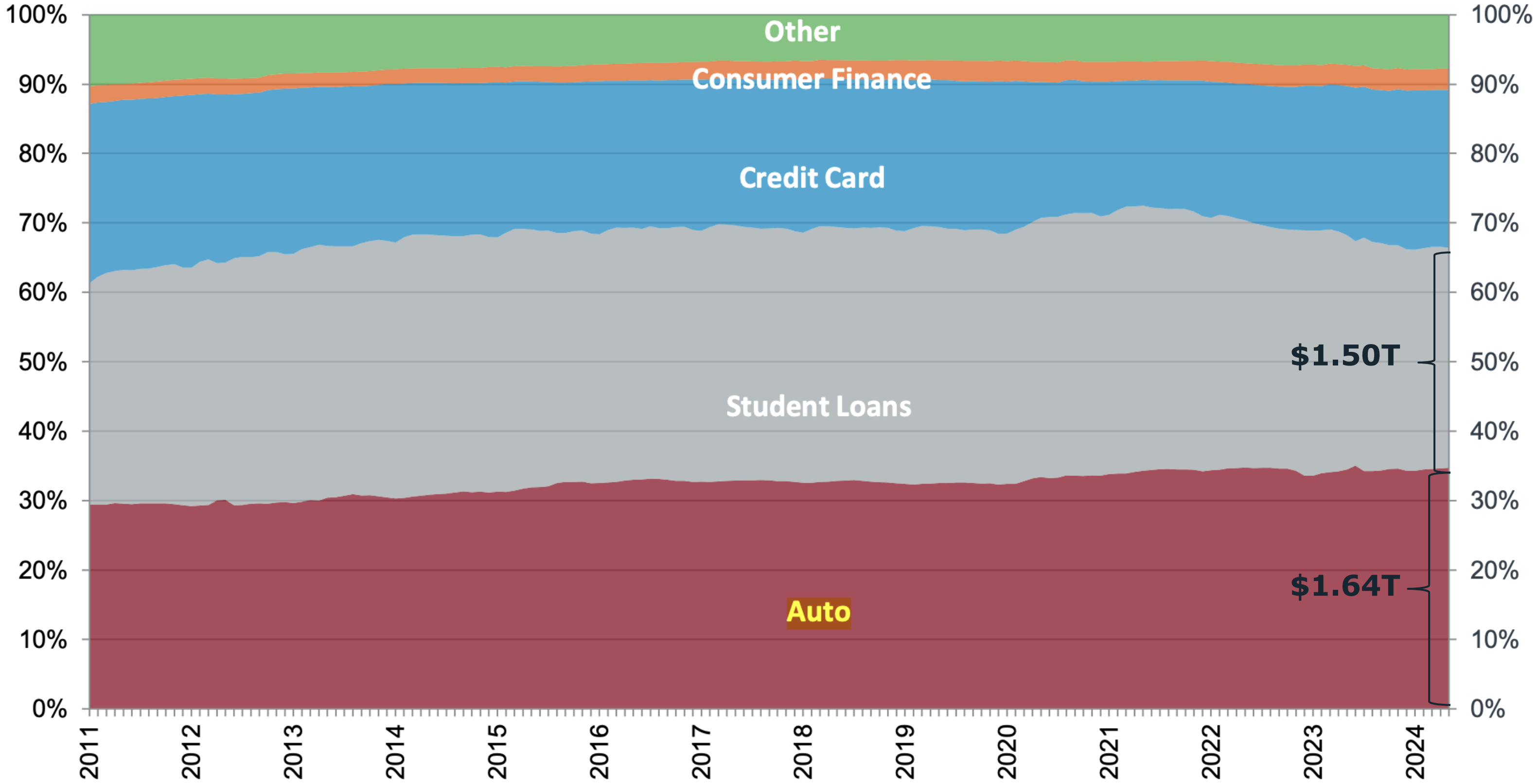


Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

With the growth of auto loan balances and decrease of student loan balances, auto has now eclipsed education as the largest source of non-mortgage debt

Non-Mortgage Debt Breakdown

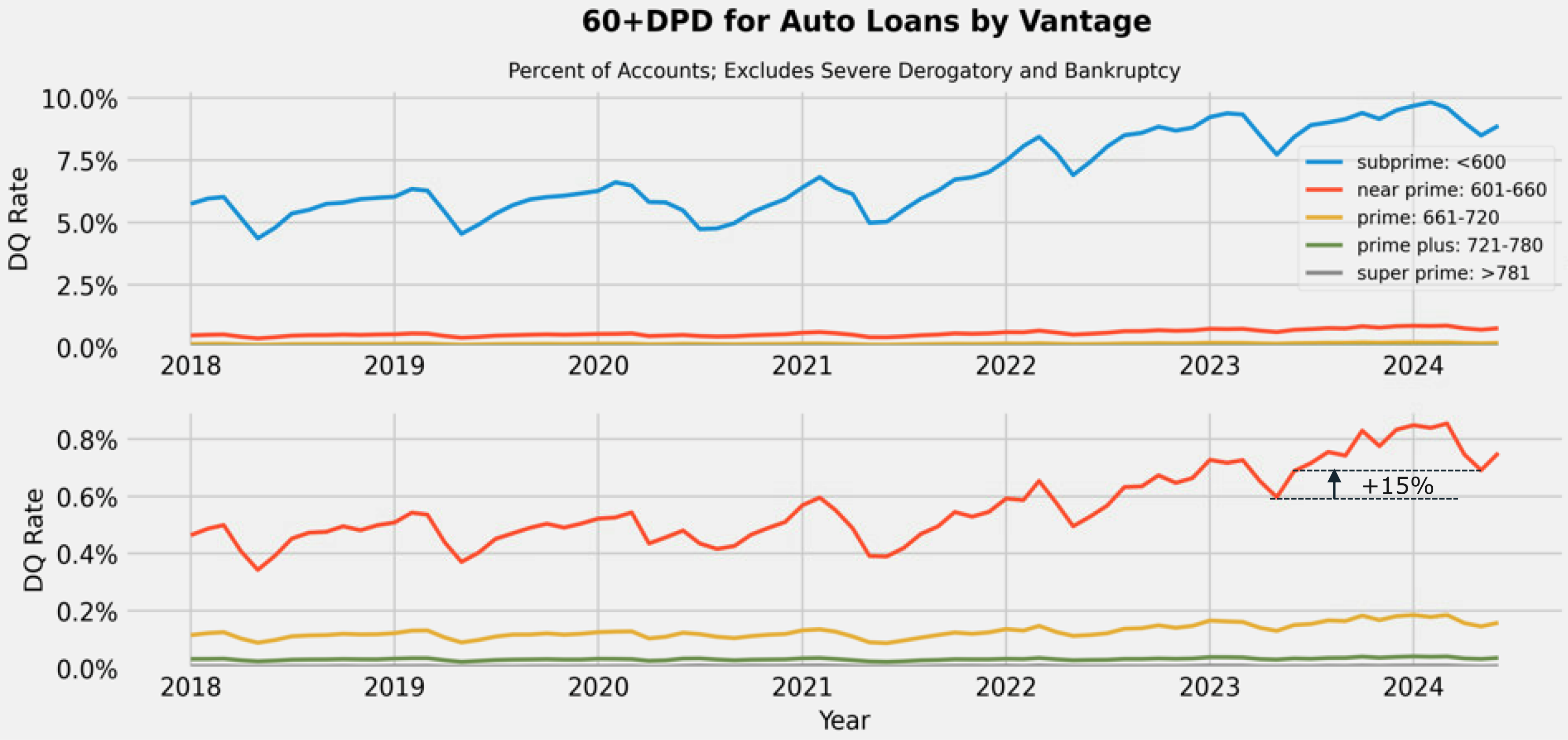
Percent of Balances; NSA



Source: Equifax. Data as of May 31st, 2024

Despite the seasonal drop in delinquencies in Q2, the DQ rate for all risk bands increased significantly YoY.

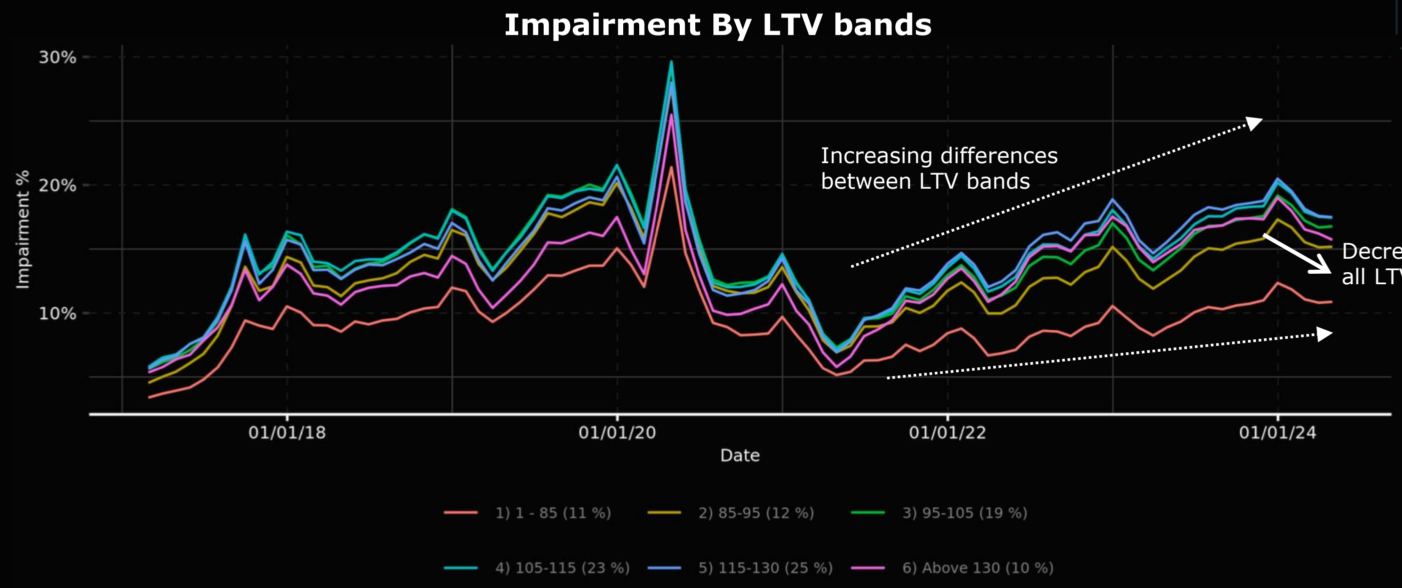
Subprime and near prime groups experienced a ~15% YoY increase in 60+DPD in Q2

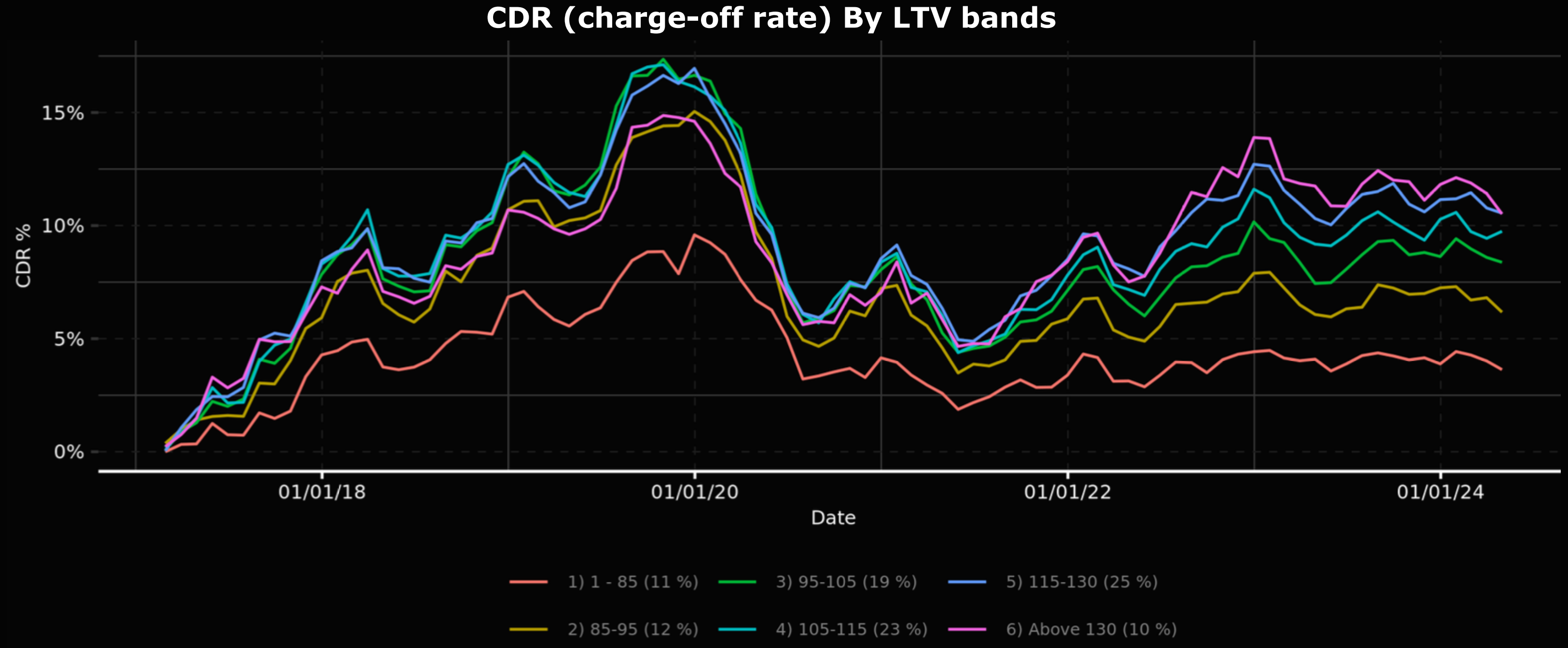


Source: 2OS, Equifax Ignite. Data as of June 30th, 2024

There was a continued decrease in impairment and charge-off rates this quarter across all LTV bands.

The risk differentiating ability of LTV continues to improve since 2022 (gaps between bands are larger)

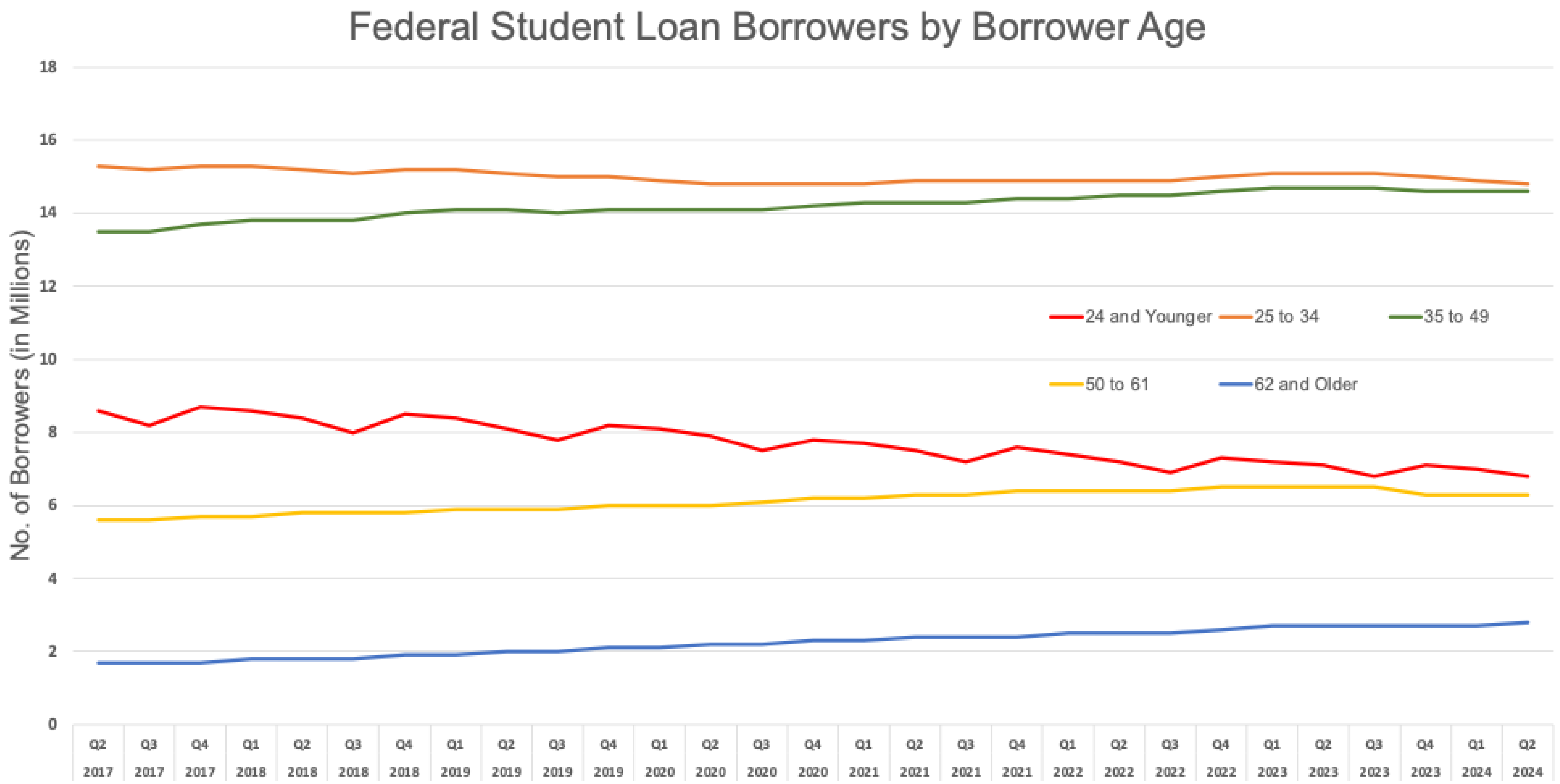




Source: dv01. Data as of April 30th, 2024

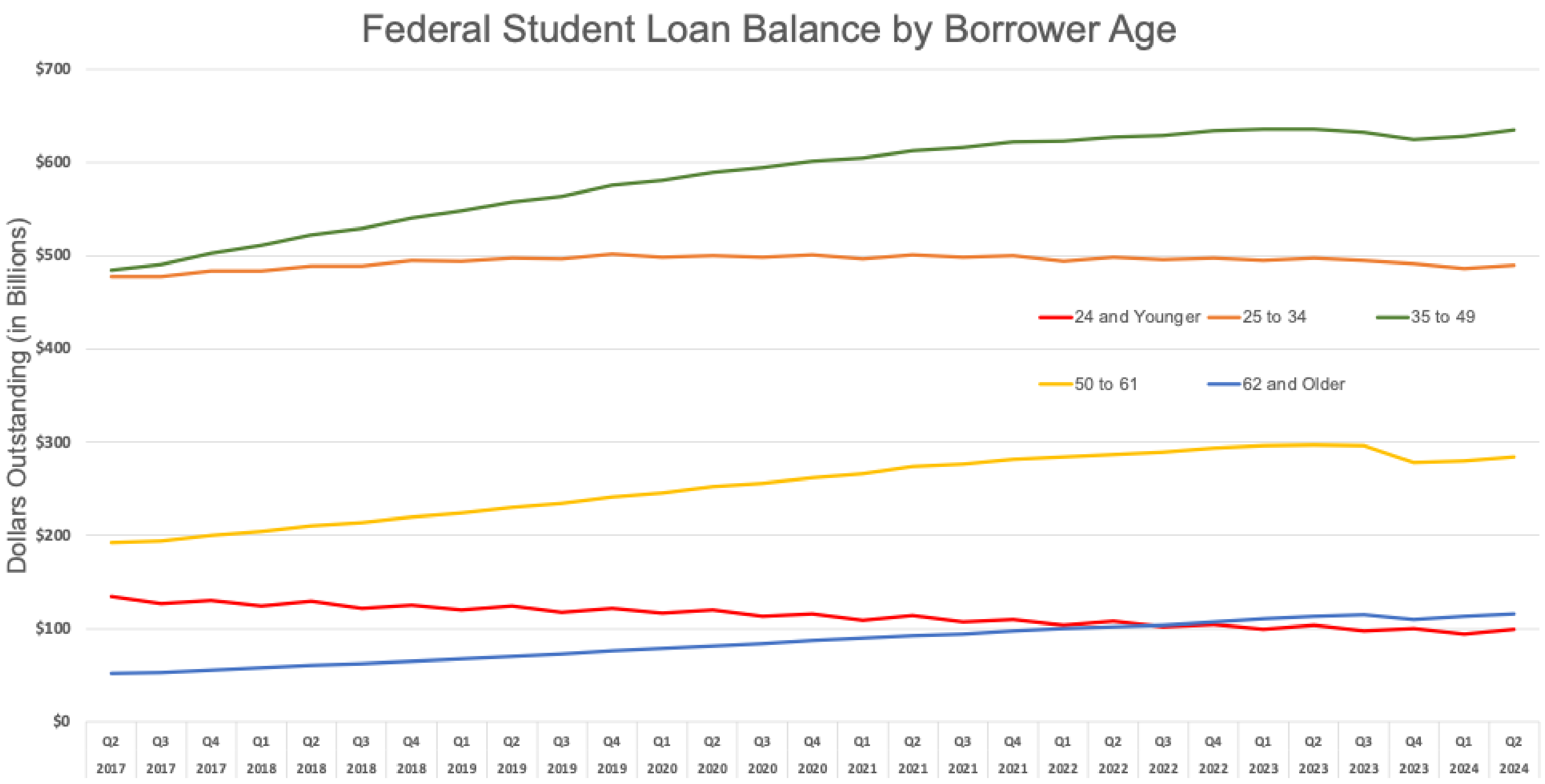
- State of the Consumer
- Credit Card
- Personal Loan
- Auto
- Student Loan
- Mortgage

The youngest cohort of student loan borrowers continues to shrink in size while other age groups remain stable or grow



Source: 2OS, FSA Data. Data as of June 30th, 2024

Total student loan balance has been decreasing for the youngest borrowers as well

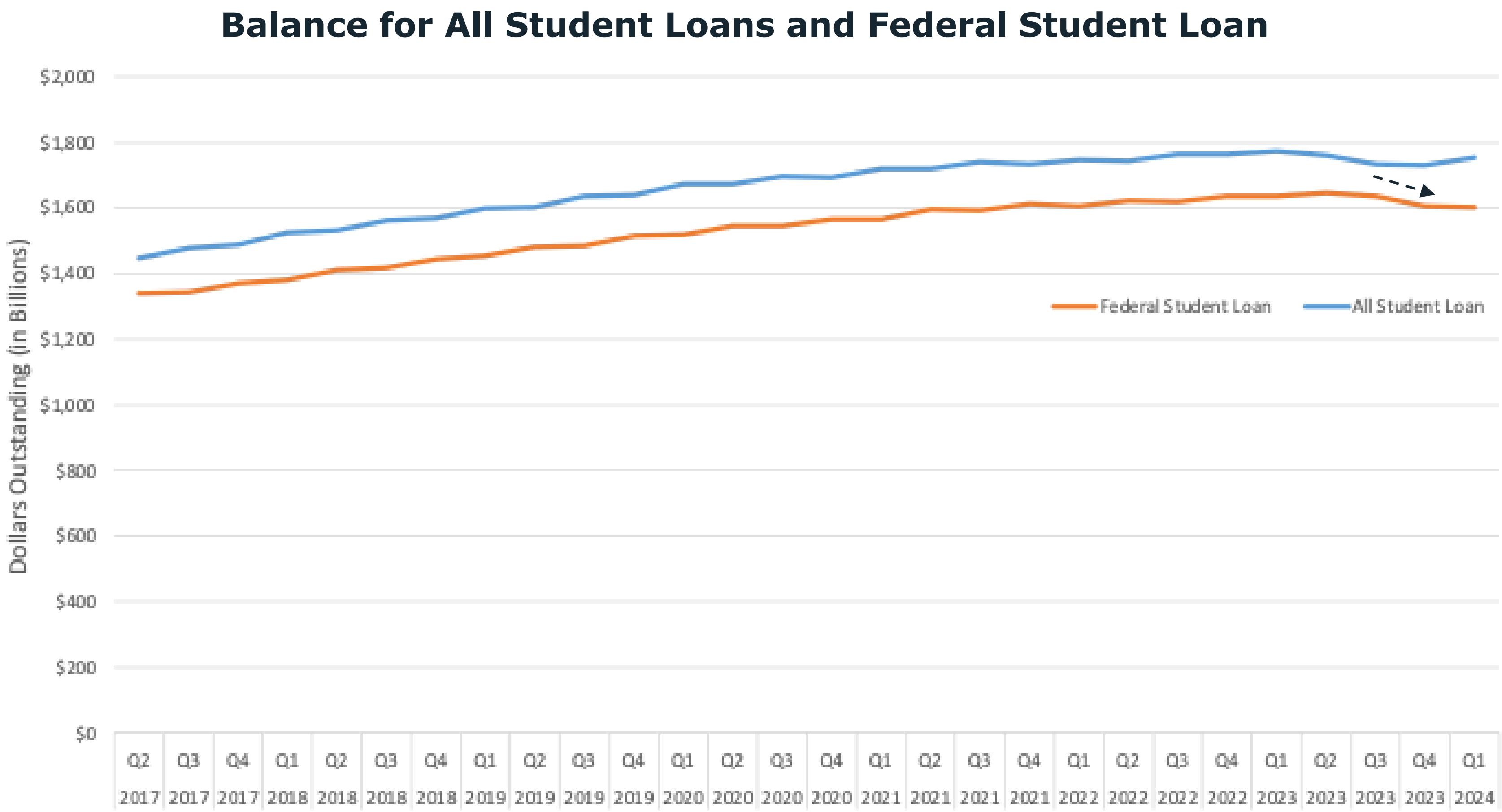


Older millennials and younger Gen X (35 to 49) have the highest balance

Source: 2OS, FSA Data. Data as of June 30th, 2024

Following a drop through H2 2023, student loan balance has **increased since the beginning of 2024**

Student loan forgiveness initiatives from the federal government may help explain the 2023 drop

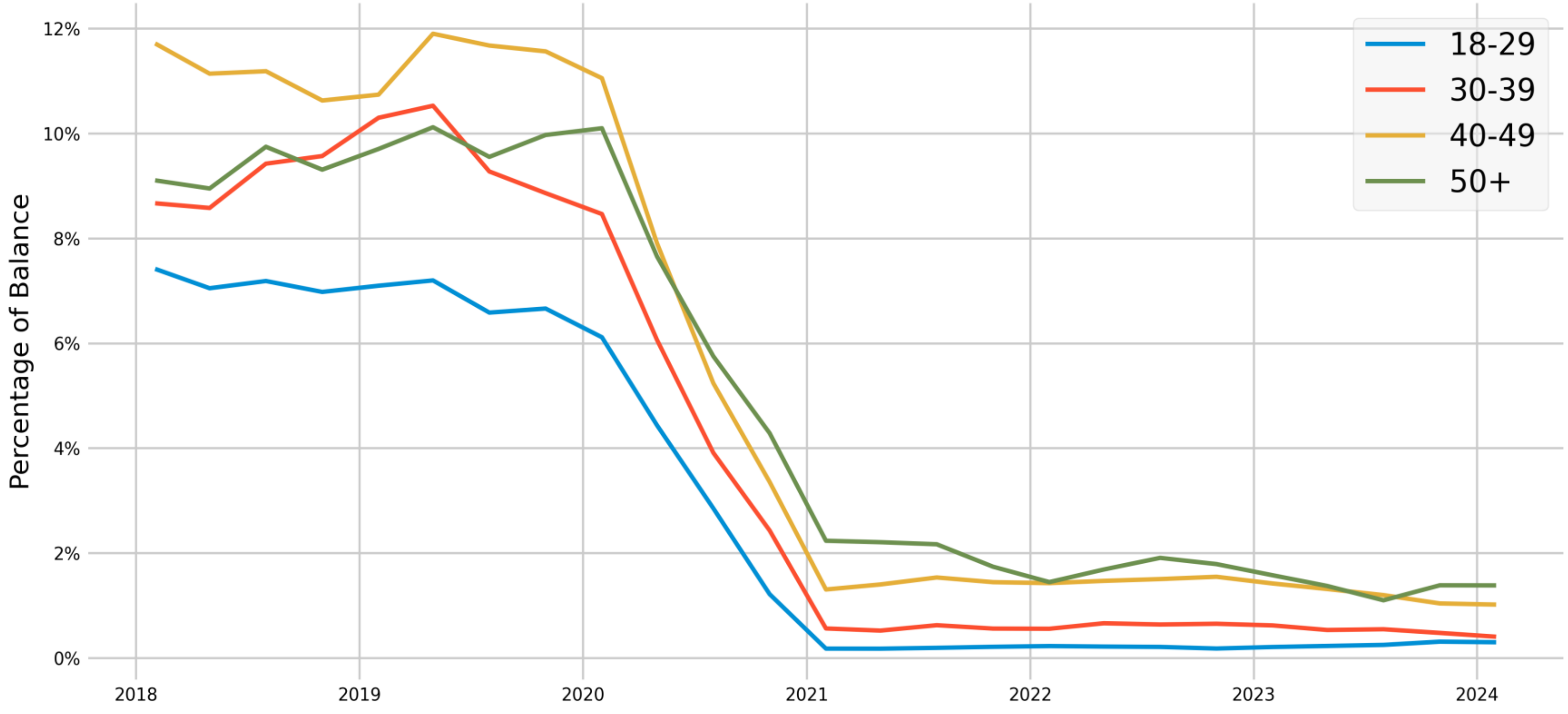


Source: 2OS, Federal Reserve data. Data as of July 8th, 2024

Older student loan borrowers historically had **higher delinquent balance rates than younger borrowers**

It remains to be determined if the same pattern will continue when the on-ramp ends

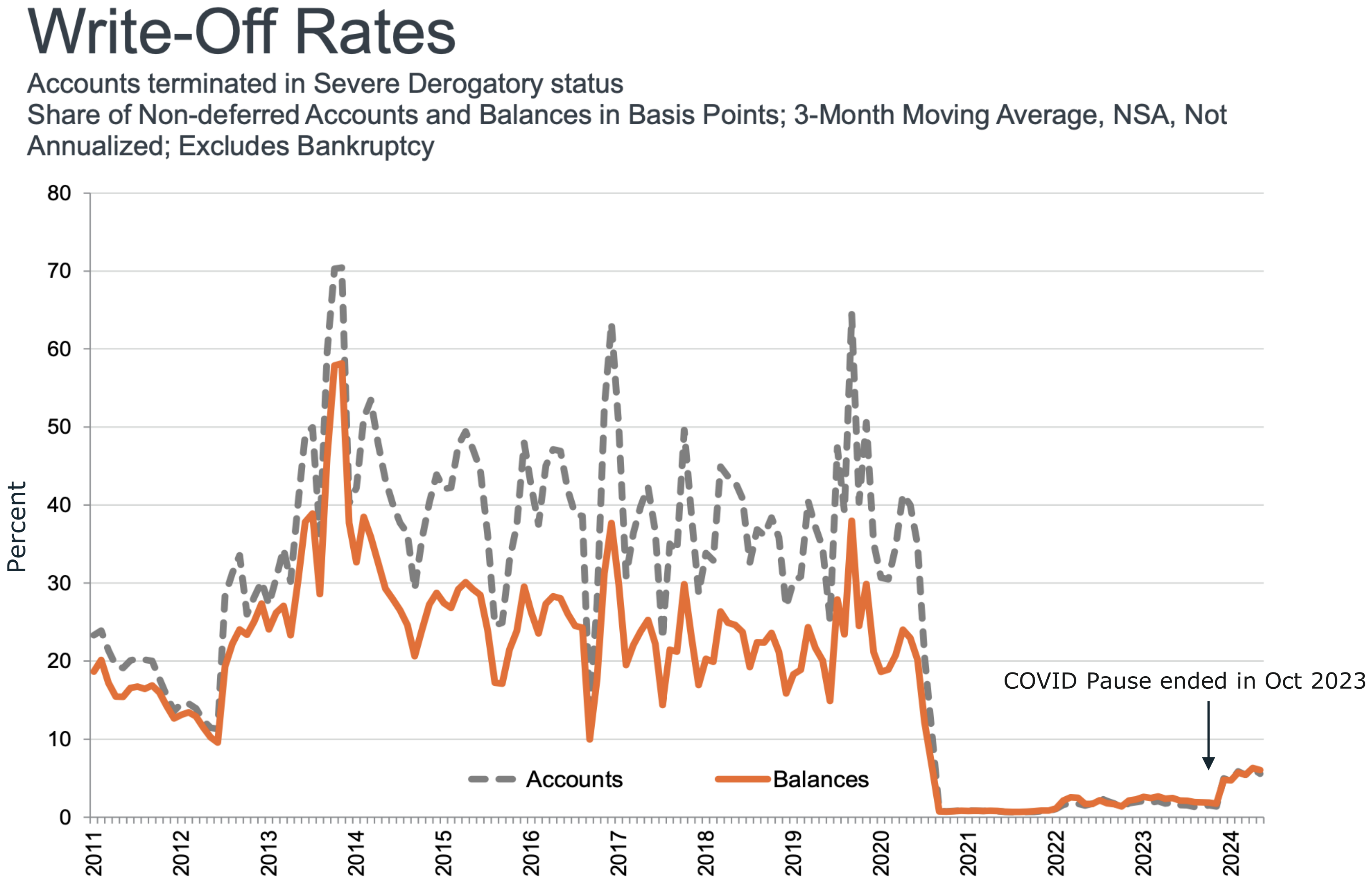
Student Loan Balance Transition into Serious Delinquency (90+DPD) by Age



4 quarter moving sum

Source: 2OS, NY Fed. Data as of May 31st, 2024

Write-off rates have begun to increase despite the on-ramp preventing reporting of defaults for many federal student loans



Source: 2OS, Equifax. Data as of May 31st, 2024

- State of the Consumer
- Credit Card
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- Auto
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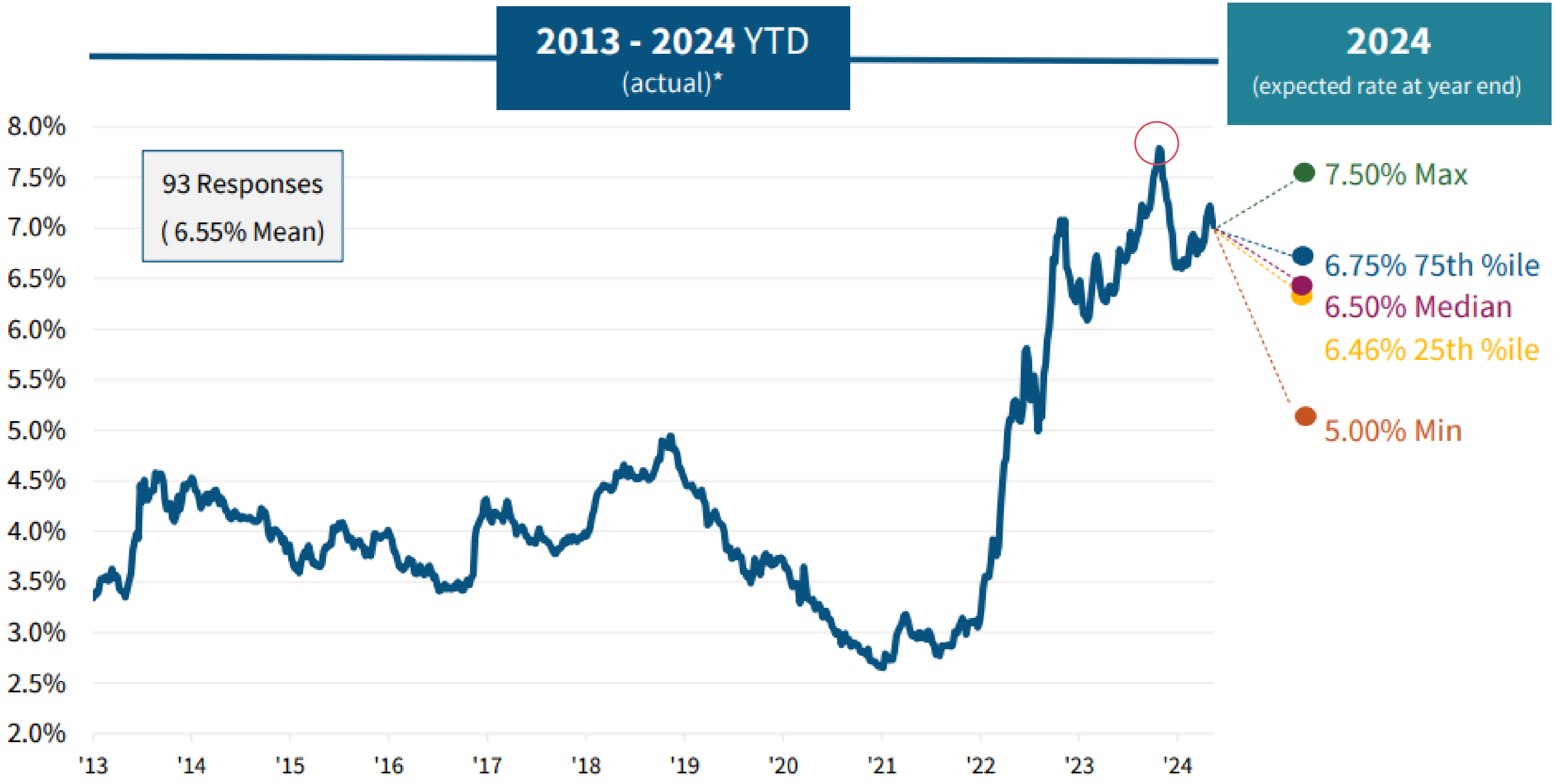
After growing more than 30% from pre-pandemic averages to its peak in late 2022, the average **mortgage rate has begun to soften**

75% of Fannie Mae-surveyed experts predict the interest rate will be 6.75% or lower by the end of the year

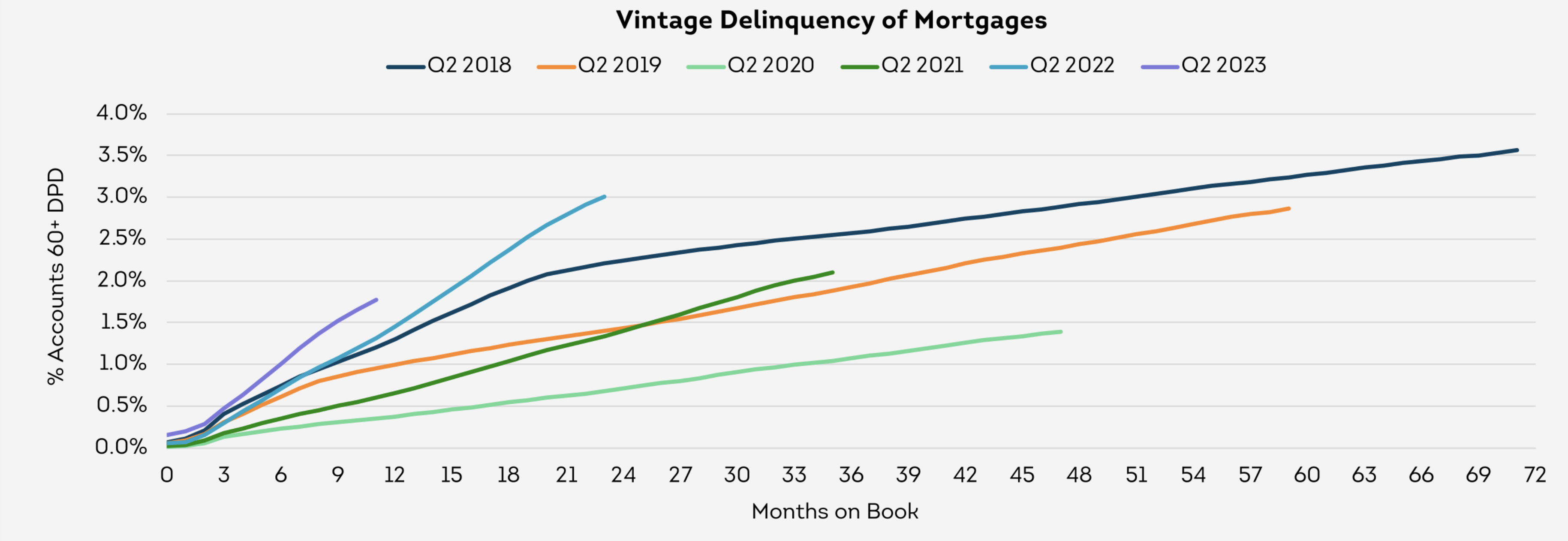
30-Year Fixed Rate Mortgage Average



Rates reached a peak in October 2023 at 7.62% and have since declined to 6.85% in July 2024

Source: Fannie Mae questionnaire. Data as of July 31st, 2024

Mortgage delinquencies (ever 60+ DPD) in the most recent vintage remain well above pre-pandemic levels



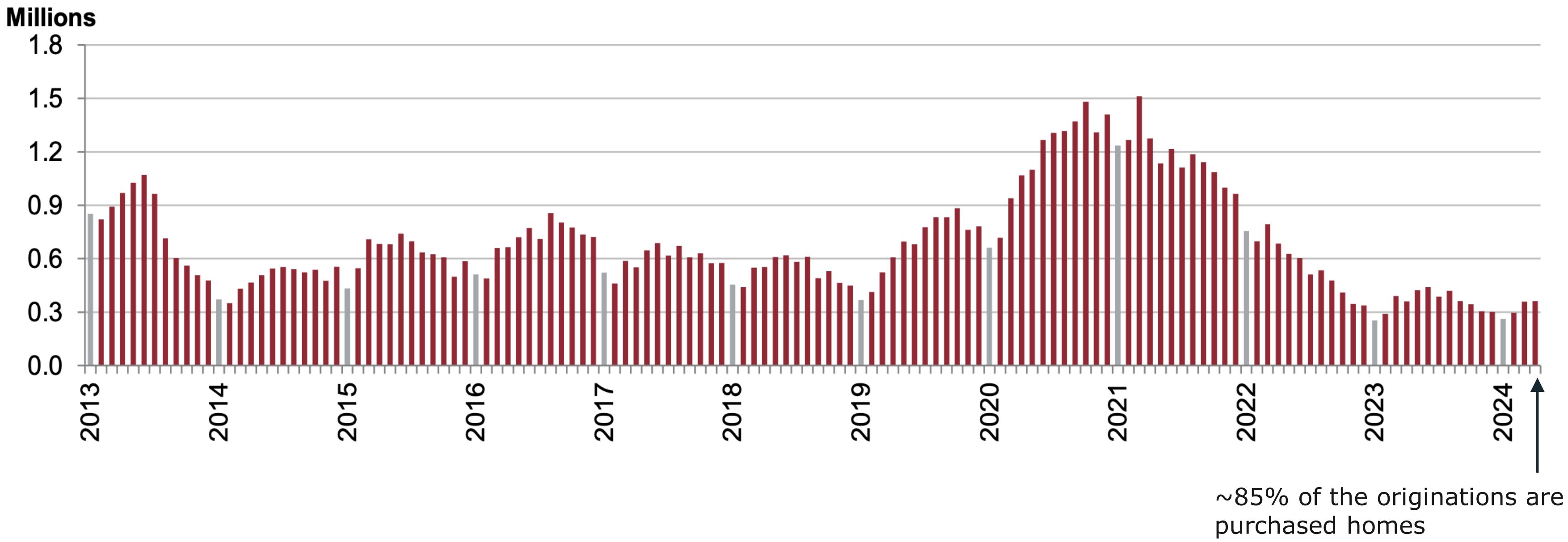
Source: Transunion. Data as of June 30th, 2024. DQ rates for vintage performance are cumulative

Despite slight easing in mortgage rates recently, originations remain low as the interest rates and prices are still historically elevated

April 2024 had a YTD increase of 0.6%

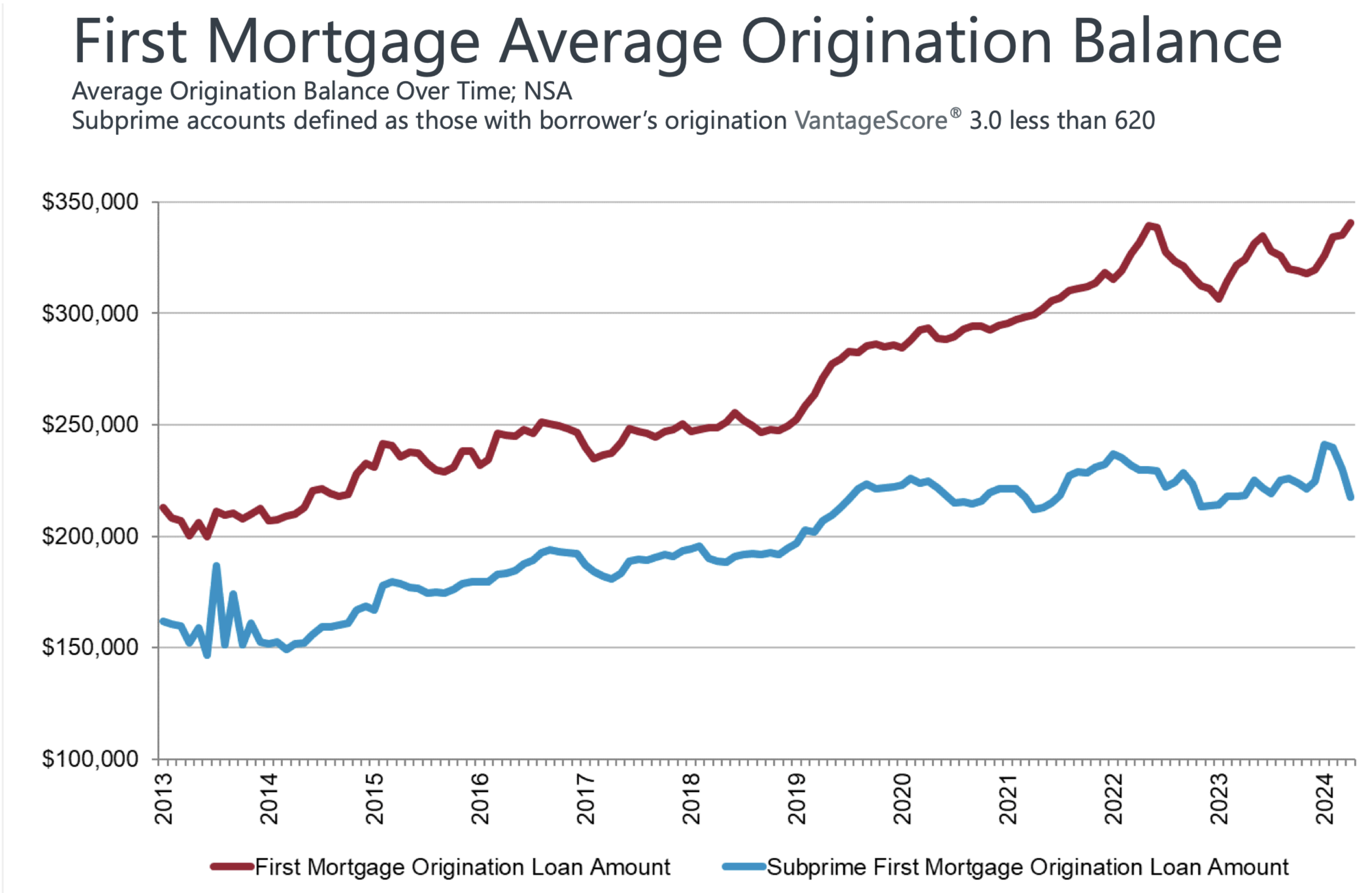
First Mortgage Originations: Accounts

Number of Accounts in Millions; NSA



Source: Equifax. Originations up to April 30th, 2024. Purchase/refi estimates provided by Transunion

While overall origination balance for first mortgages increased in Q1 of this year, average origination **balances decreased for subprime** borrowers

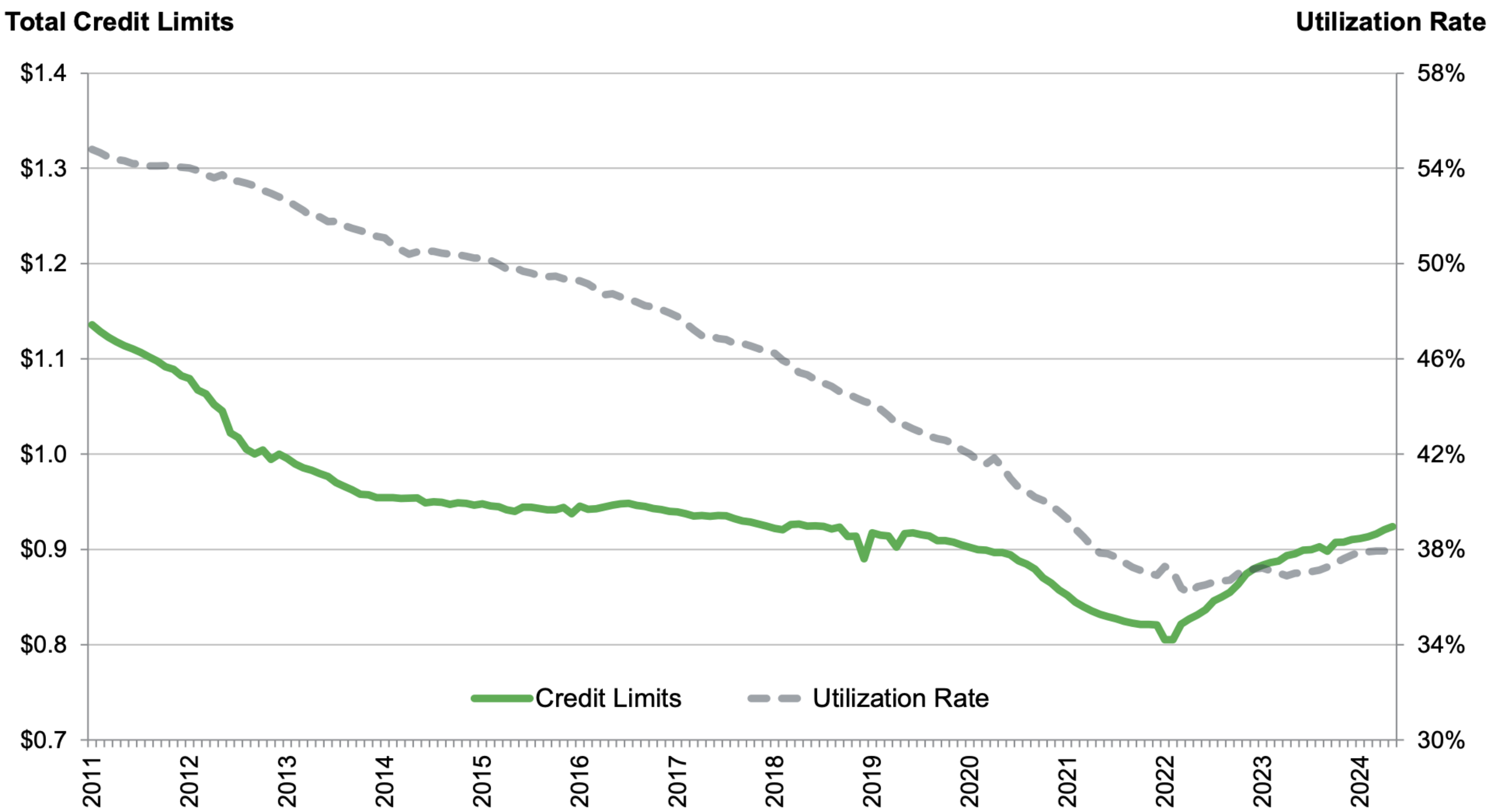


Source: Equifax. Data through April 30th, 2024

HELOC total credit limits and utilization continued to rebound, both increasing since 2022

Utilization and Credit Limit

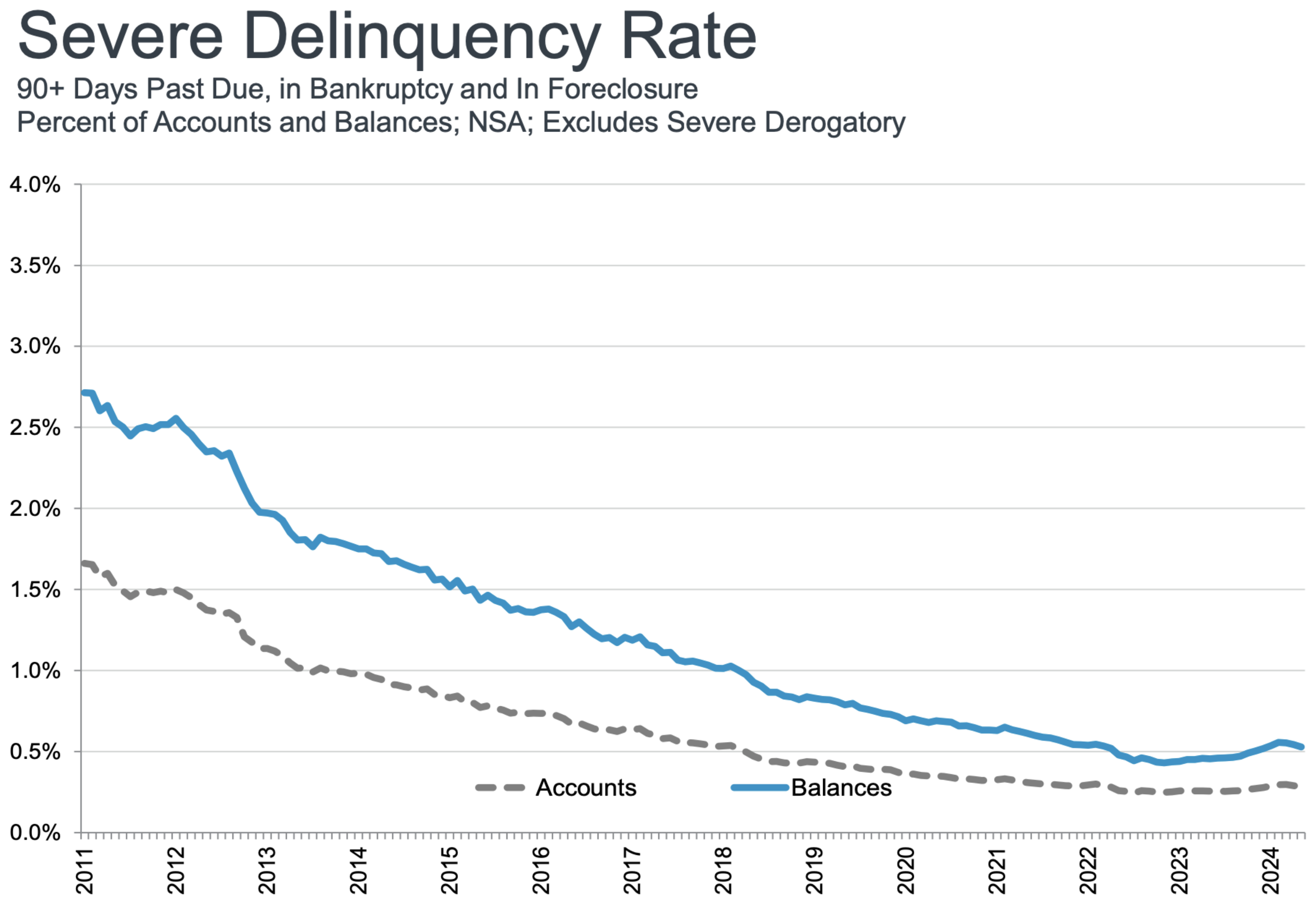
Utilization Rate in %; NSA
Credit Limit in $Trillions; NSA



Source: Equifax. Data as of May 31st, 2024

The HELOC delinquency rate **dropped from the recent high** point in Q1 2024

Delinquencies were on a decreasing trend prior to the pandemic and had stayed that way until 2023, when they began to rise



Source: Equifax. Data as of May 31st, 2024

Acknowledgments

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About 2OS

2nd Order Solutions (2OS) is a boutique credit risk advisory firm that specializes in solving the world's most challenging credit problems. 2OS was founded 12 years ago and consults to a wide range of banks, card issuers, fintechs, and specialty finance companies in the US and abroad.

2OS has deep experience with lending businesses across Card, Auto, Small Business, and Personal Loans, at all points in the credit lifecycle. 2OS partners have vast expertise in all aspects of Collections, both as operating executives and as consultants.

For more insights and commentary on the lending industry, visit us at https://2os.com/insights/

Equifax Ignite Definitions

Active Accounts: This includes all accounts that have a reported status in the most recent three months. Accounts categorized as closed are included in the month in which that status was first reported and are excluded from active accounts thereafter.

Definition of delinquency: For credit car, auto loans, and personal loans, accounts are classified as delinquent at 60+ days past due. Specifically, they are included in 60-90 DPD, 90-120 DPD, and 120+ DPD buckets; charged off and bankrupt accounts are excluded. For student loans, accounts are classified as delinquent at 90+ DPD. These accounts are included in 90-120 DPD, 120+ DPD and bankruptcy buckets; charged off accounts are excluded. Vintage performance views are cumulative.

Definition of Personal Loans: Personal finance and installment loan are classified as personal loans.

Origination timing: Originations are lagged by 2 months from the current archive date. Hence, the most recent origination datapoint is from April 30th, 2024.

Vantage bucket: In any charts where borrowers are split out by Vantage bucket, borrowers without a Vantage score are excluded.

Vantage bucket timing: To better observe movements within Vantage buckets (and reduce the effect of re-classification of accounts across buckets), the vantage score is observed at a 3-month lag from the current archive date.