2024 Q1 Credit Risk Review

Trends and Early Risk Indicators in Consumer Credit

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2nd Order solutions

Executive Summary – State of the US Consumer Credit

We are not calling the top of delinquency rates but on average, risk is more mixed than worsening in Q1:

- **Headwinds**
  - Delinquencies remain elevated year over year (YoY) across asset classes. However, there have been recent month over month (MoM) declines in some areas, likely attributable to consumers using tax returns to pay down debt.
  - The $2.1T in excess savings built in the pandemic is completely depleted as of February 2024, as consumers grapple with sticky inflation and interest rates.
  - The CFPB announced an amendment to Regulation Z, effectively capping late fees at $8. Some banks have started raising interest rates even more and increasing other fees to make up lost revenue.
  - As car prices decrease, more consumers are trading in vehicles with negative equity, despite historically elevated trade-in values.
- **Tailwinds**
  - Recent vintage performance has improved/flattened in personal loans and card, mostly attributed to 2023's tightening of underwriting. Personal loans performance is in line with pre-2022 vintages.
  - Unemployment remains low at 3.8%; historically, it is the primary driver for increases in consumer credit risk, especially for prime customers.
  - Tax returns are trending higher YoY, though more consumers plan to use the extra cash on shopping compared to 2023.
  - Student loan balances are decreasing, suggesting that consumers are paying down debt despite pause in delinquency reporting.

Executive Summary - Credit Cards

Credit Cards

- The Consumer Finance Protection Bureau (CFPB) amended Regulation Z in March, capping late fees to $8 (previous average fee is over $30). Banks have started raising APRs further and could adjust other revenue-drivers (AMF, MMF, and penalty rates) to offset the regulation.
- Delinquencies remain elevated compared to pre-pandemic. However, recent vintages are performing slightly better in higher risk segments than 2022 vintages and March saw MoM declines beyond seasonal trends.
- Recent credit card vintages are showing worsening in performance in the later months on book, which if continued could pose serious concerns to lenders.
- Although roll rates have been high in the recent quarter, there have been signs of improvement in March, likely due to seasonality.
- Subprime card origination volumes have dropped since H2-2022 as lenders have tightened their underwriting standards.
- Average origination balance increased across risk bands as lenders continue to raise credit limits.

Executive Summary - Personal Loans & Mortgages

Personal Loans

- Delinquency levels are lower than pre-pandemic averages, driven by subprime improvement due to credit tightening.
- Recent vintages are performing better than 2022 originations and are in line with pre-COVID vintages.
- Pre-tightening vintages experienced a rapid decrease in impairment balance in Q1, showing early signs of a more widespread performance improvement.
- Tightening continued in Q1, despite seasonal trends attributed to tax returns. Average FICO and income has been unchanged from last quarter, starting stabilization at the tightened levels.

Mortgages

- Write-Off rates are still historically low but have been trending higher in recent months.
- Recent Vintages are performing worse than pre-pandemic.
- Mortgage originations remain low due to continued interest rate increases.

Executive Summary – Auto Loans & Student Loans

Auto Loans

- Auto delinquencies decreased in Q1 in accordance with seasonal trends, although they are still higher YoY.
- Loan-to-value (LTV) ratio continues to be a key risk differentiator post-COVID.
- Used car prices are decreasing and the share of trade-ins with negative equity is on the rise as more consumers are trading in vehicles purchased at high prices during the pandemic, creating risk for future Collection and Recovery rates.
- Despite rising interest rates for used cars loans and relatively constant down payments, average monthly payments are remaining relatively flat.

Student Loans

- While servicers will not report student loan (SL) defaults until September 2024, customers have started paying down their debt as seen in an overall decrease in SL balance.
- We do not yet see a significant impact on spending for those consumers with resumed student loan payments, likely due to the 'on-ramp' period.

Executive Summary Special Feature – Credit Builder Trades

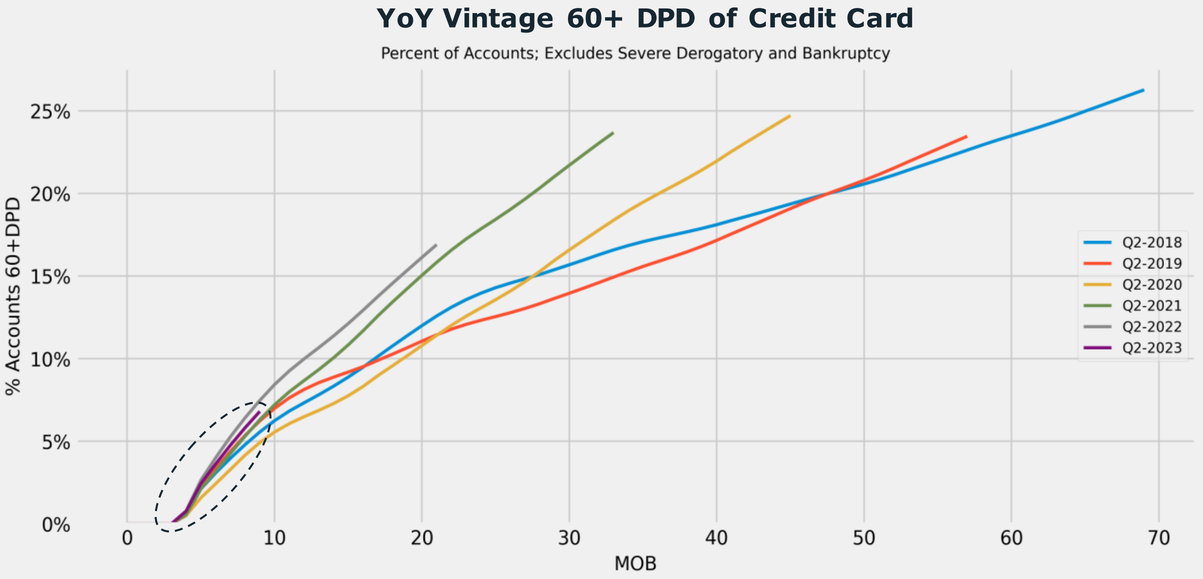
Credit Builder

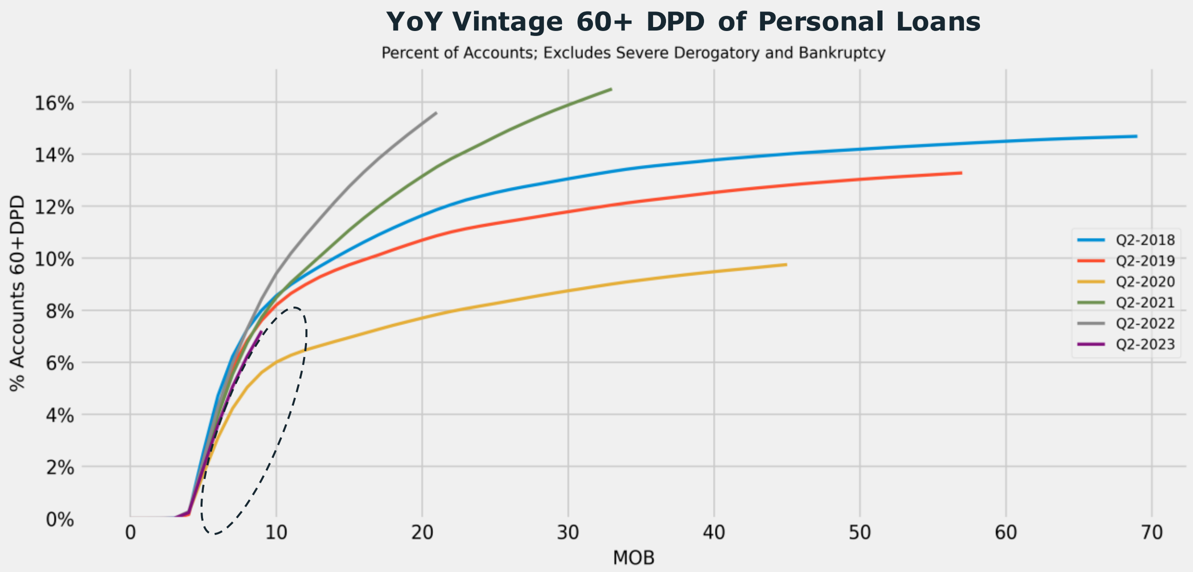
- Credit Builder (CB) Originations have significantly increased since 2019. With 2.4 million Credit Builder Originations in 2023, there was a 40% growth when compared with 2022 originations.

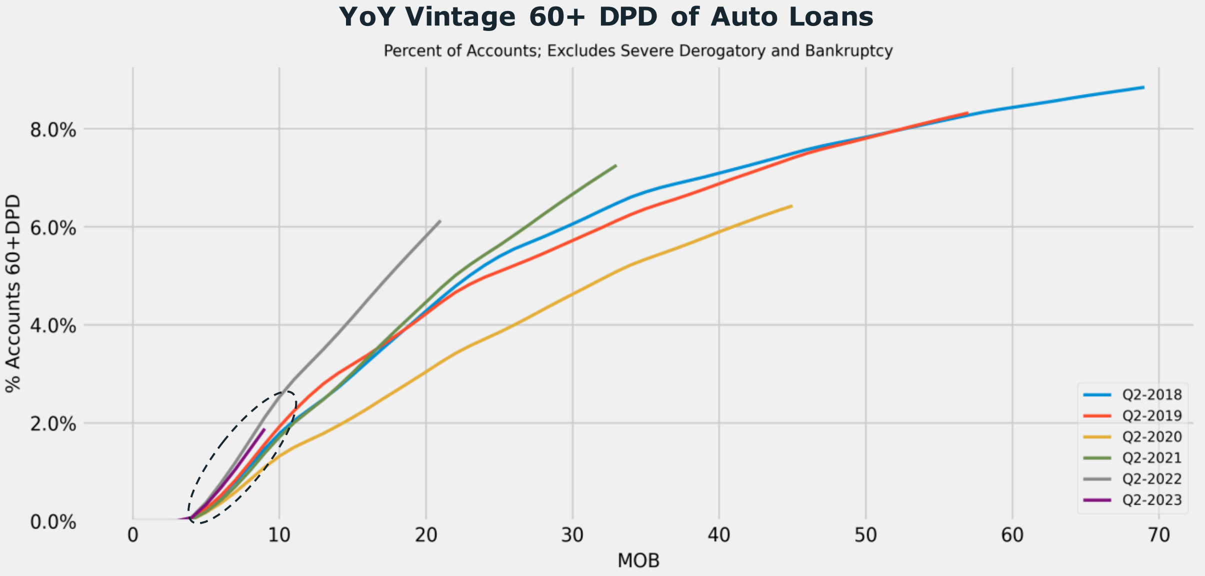
- Getting a CB product can be a sign of increased risk, especially for consumers in higher Vantage bands, often leading to a sharp increase in delinquencies and decrease in Vantage scores

- Within one year after opening a CB trade, customers with No Vantage at origination can get a Prime score.

Recent vintages are outperforming those from a year ago, but delinquencies remain elevated







Newer Vintages of Personal Loans are in line with old ones. More recent vintages of Credit Cards are flaring out in the later months.

Source: 2OS, Equifax Ignite. Data as of March 31, 2024

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- State of the Consumer
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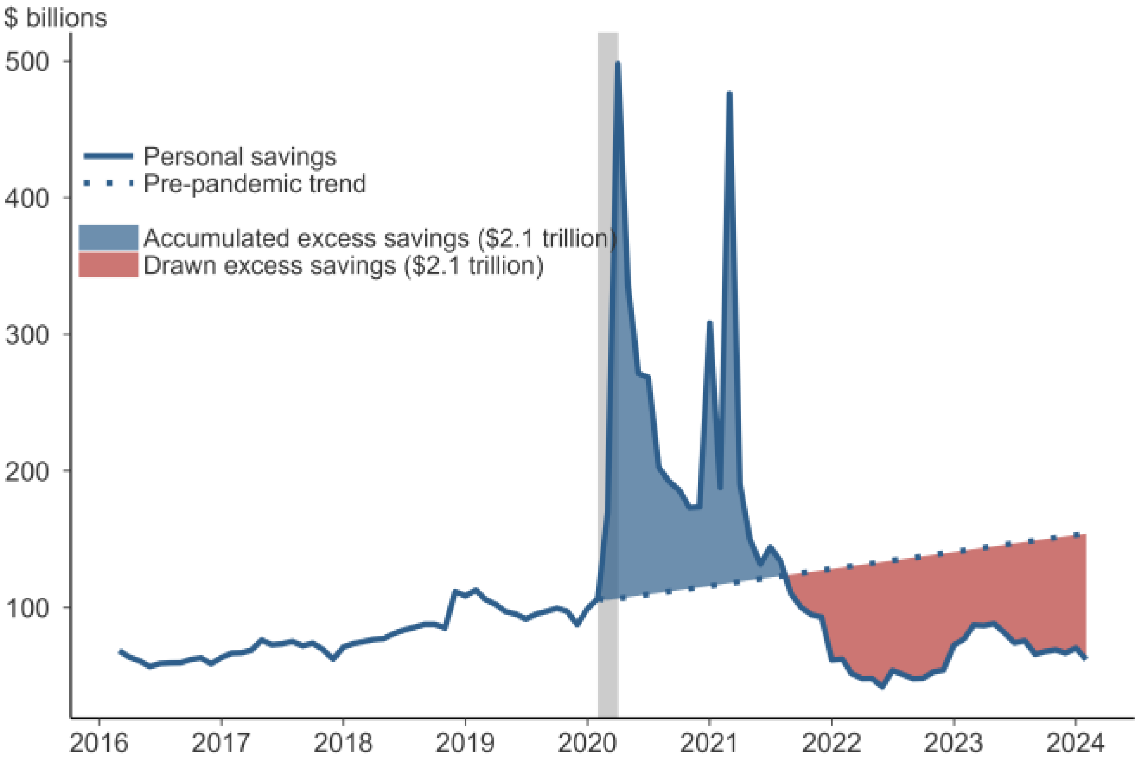
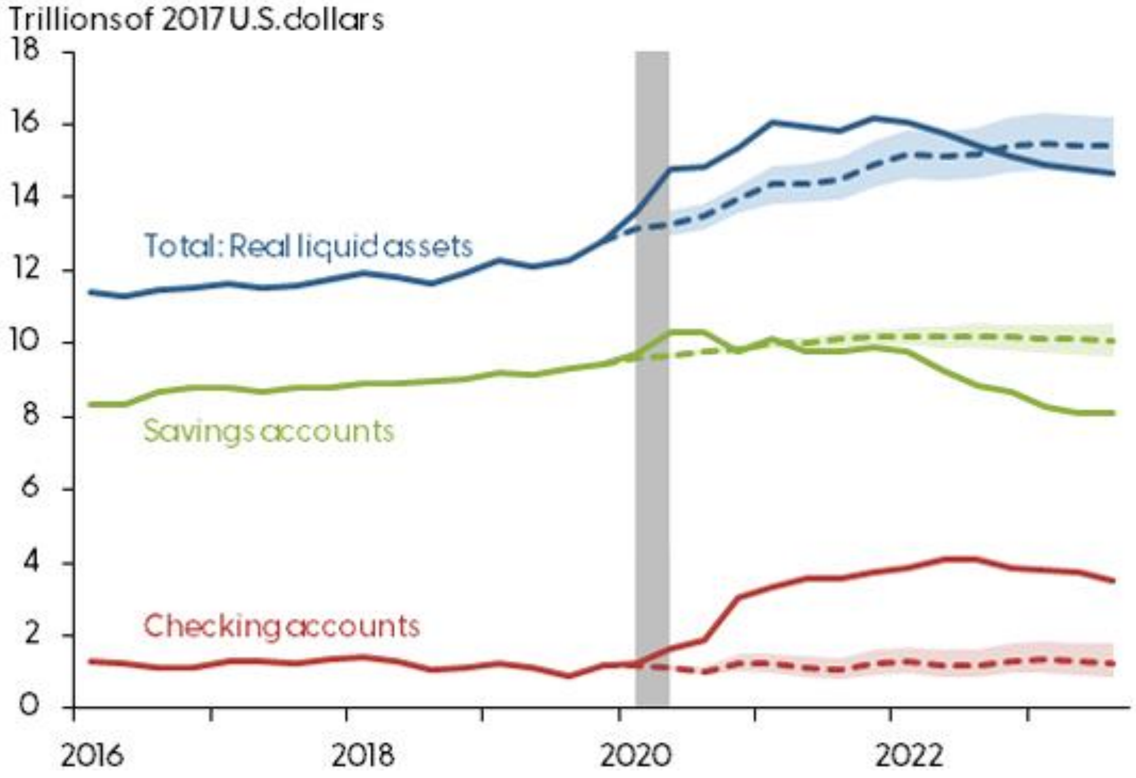
Consumers’ spending habits have eliminated the excess savings accumulated during the pandemic

Aggregate Personal Savings Compared with Pre-Pandemic Trend



Gray shaded area represents Natl. Bureau of Economic Analysis recession dates

Overall Real Liquid Household Wealth



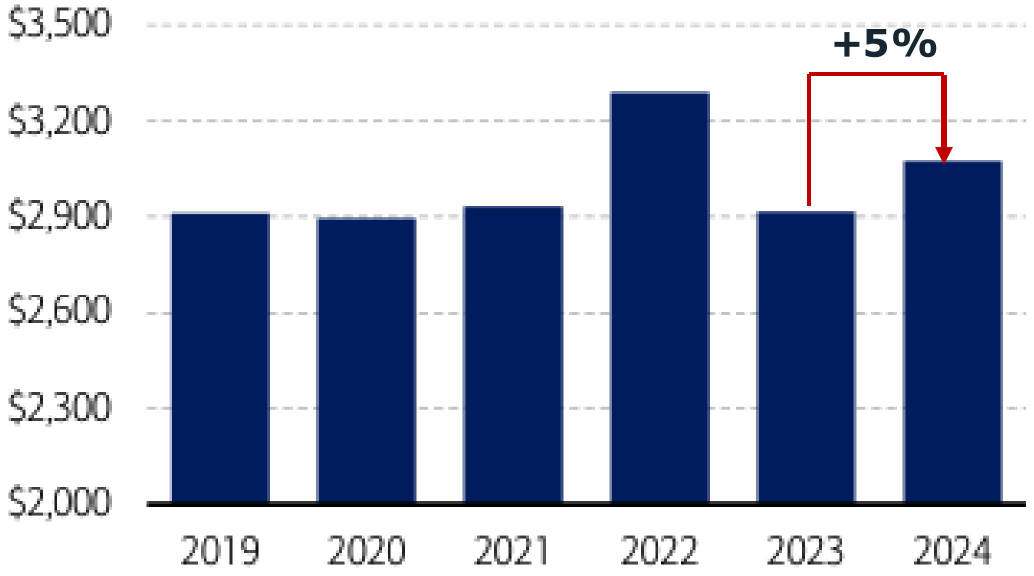
Dashed line represents projected path, shading is 90% confidence interval

Consumers liquid assets are lower than pre-pandemic projections, as it seems they continuously shifted savings into checkings to fund spending

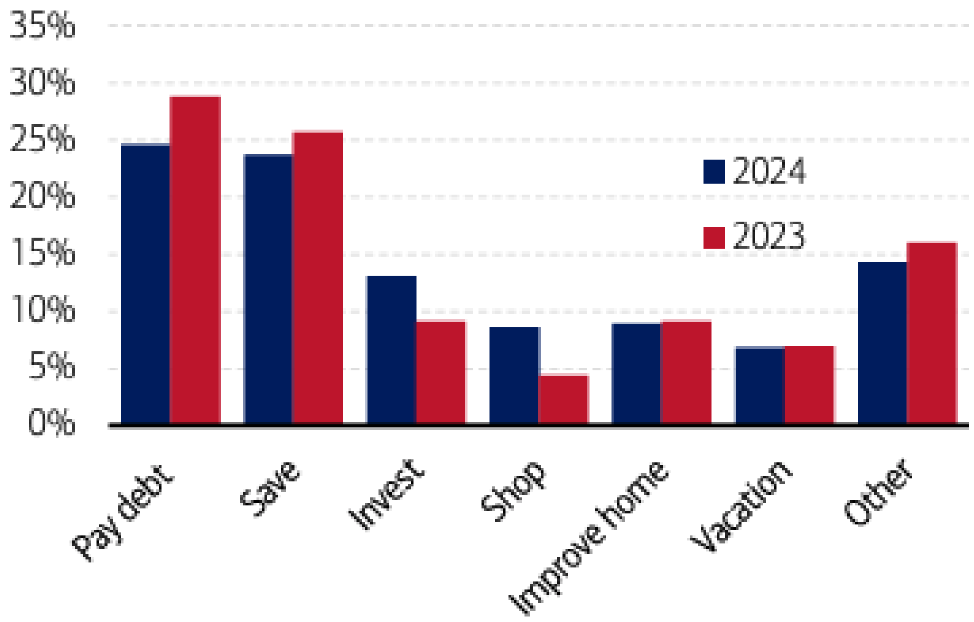
Source: Federal Reserve Board of Governors and Federal Reserve Bank of San Francisco, data from Bureau of Economic Analysis

Tax returns are trending higher in 2024, and more consumers plan to use the extra cash on shopping compared to last year

Average federal tax refund per household, Jan 1 through March 29, 2024



Survey results to the question: "How do you plan to spend your tax refund this year?"

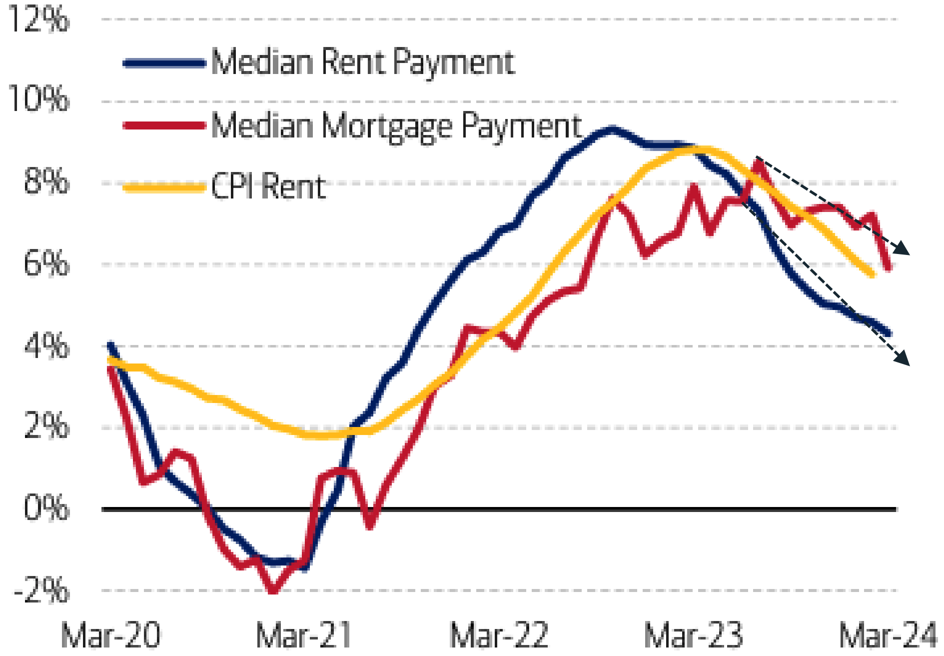


Although most consumers intend on paying debt or saving with their refunds, plans to shop saw the largest share increase from 2023

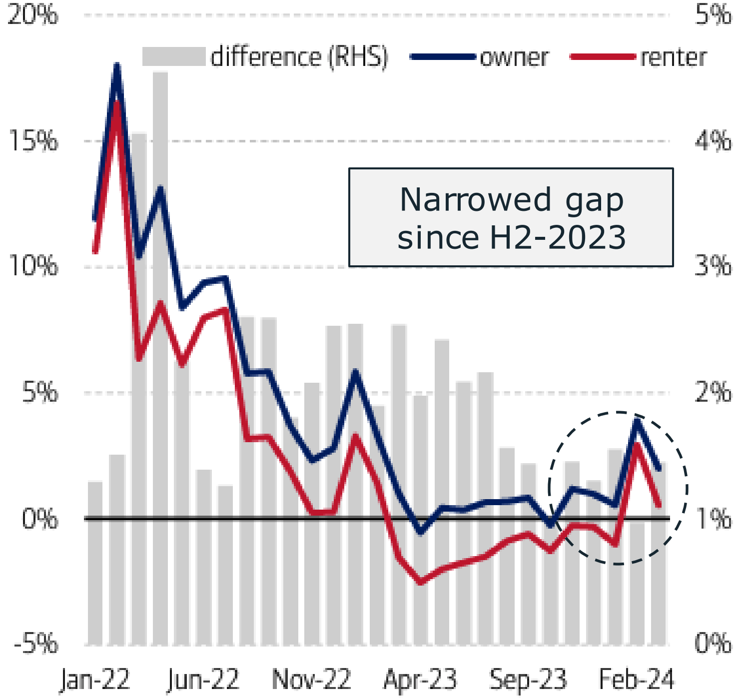
Source: IRS, Bank of America; CivicScience. Data as of March 31, 2024

Rent payments are easing faster than mortgage payments, providing an upside in non-housing consumption for renters

Median rent and mortgage payment, and CPI rent YoY growth



YoY growth in non-housing card spending per household of homeowners and renters



Homeowners are more squeezed in housing payments due to continued uptick in home prices

Source: Bank of America. Data as of March 31, 2024

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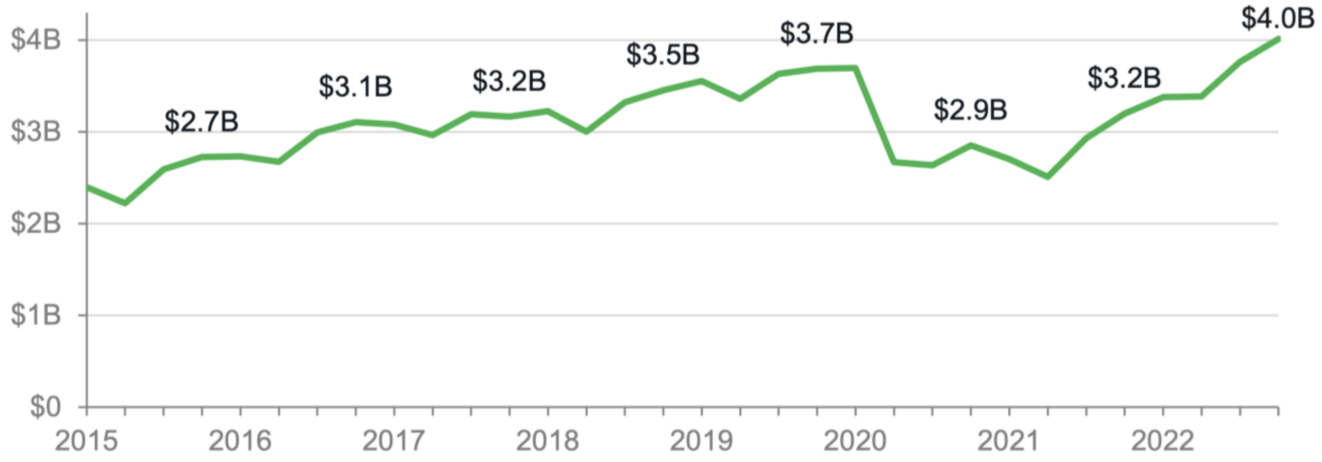
- Credit Builder Trades

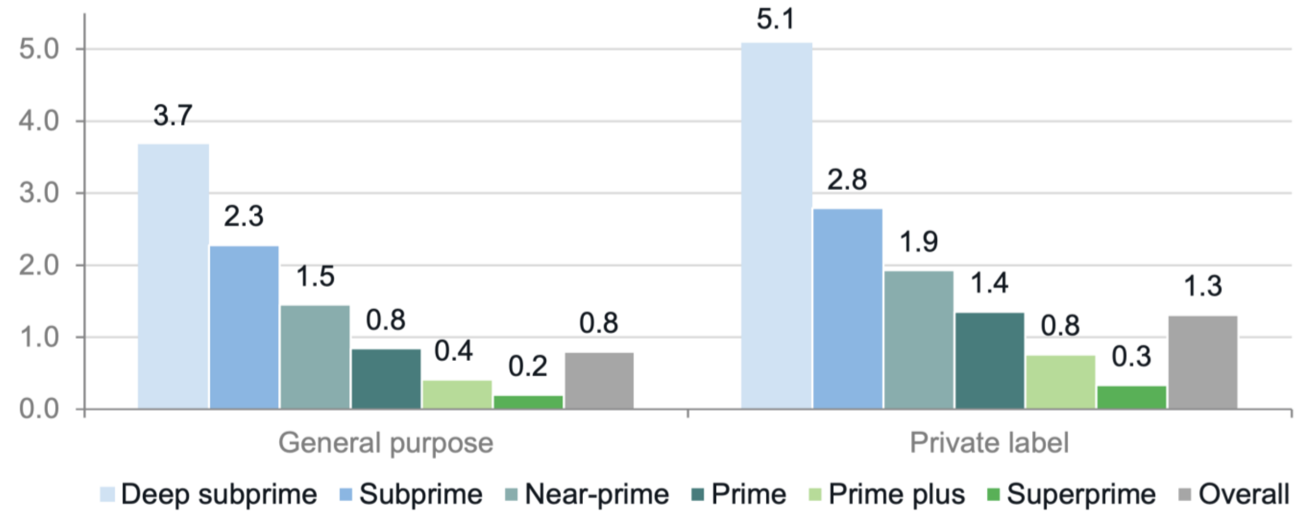
On March 5th, The CFPB announced an amendment to Regulation Z, effectively capping late fees at $8

Quarterly late fees make up a significant portion of revenue. We expect adjustment in other revenue drivers

Quarterly Late Fees Charged



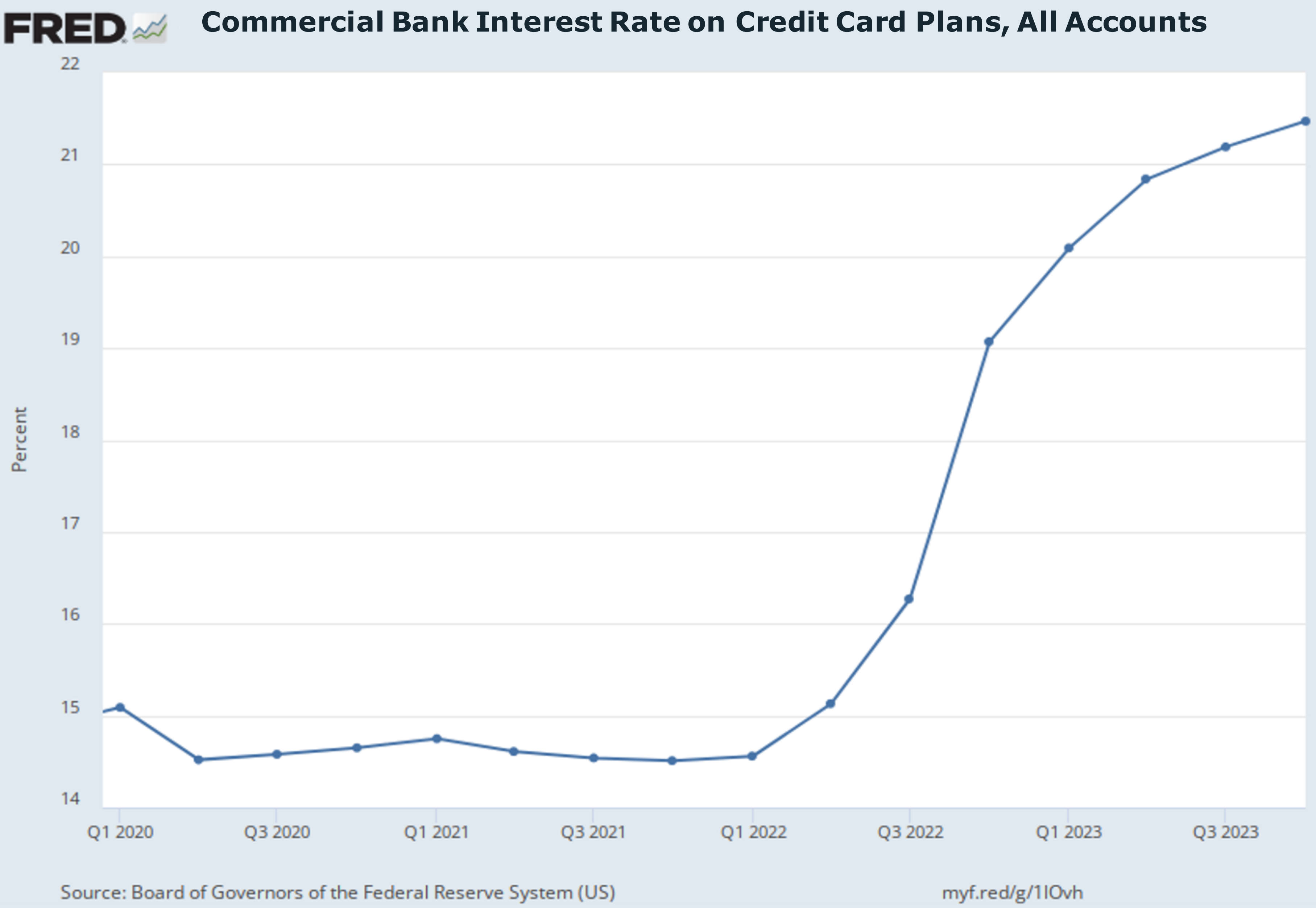
Average Late Fee Incidence per Year, 2022



Source: Consumer Financial Protection Bureau, Data from The Federal Reserve Board's "Y-14M" Data Collection, as of October 2023.
For more information: https://2os.com/insights/new-credit-card-late-fee-regulation-strategy-and-unit-economics-impact/

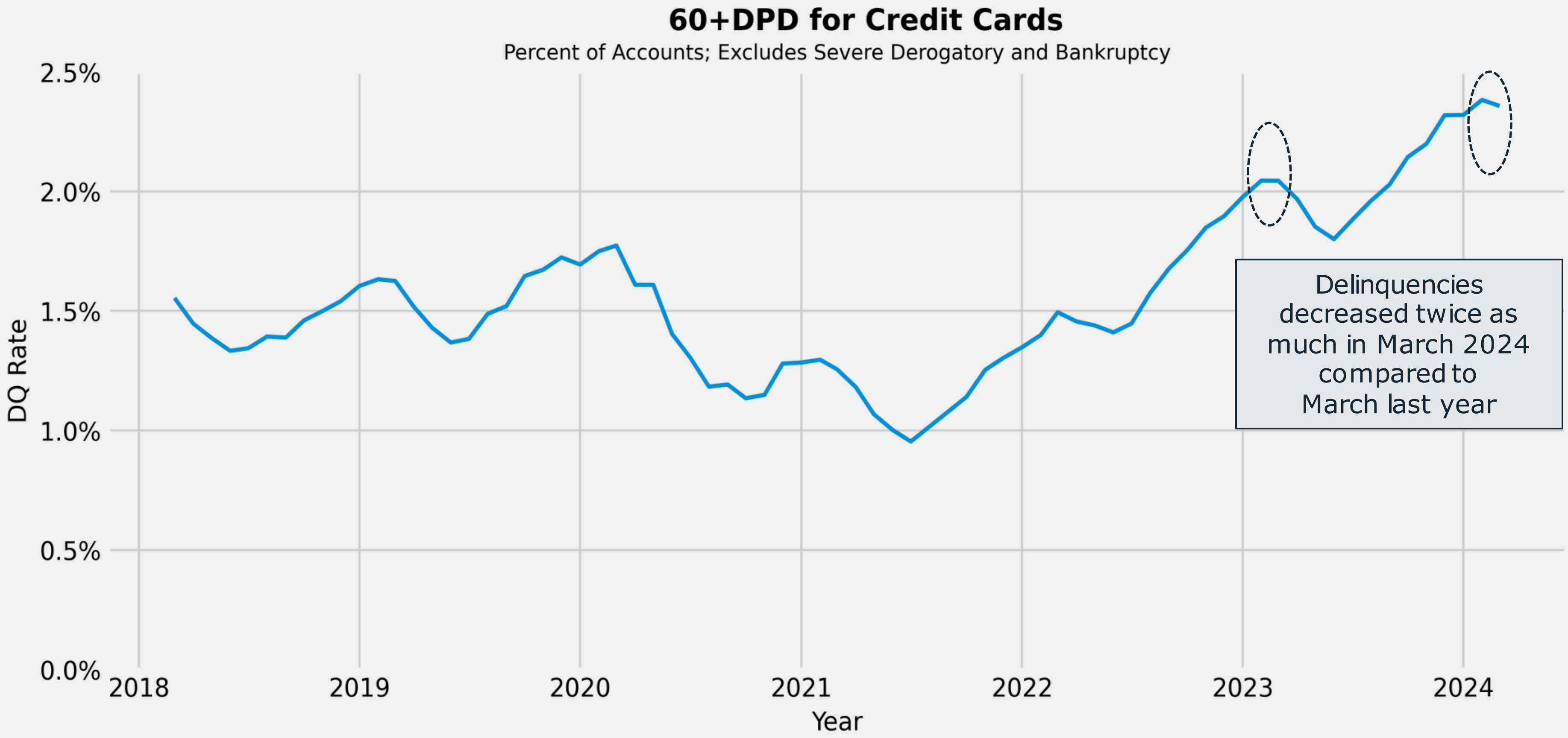
Credit Card interest rates have been on the rise and reached a record high in February

As banks attempt to make up lost revenue due to new **late fee regulation,** interest rates could continue to rise



Delinquencies are above pre-pandemic levels but with signs of improvement

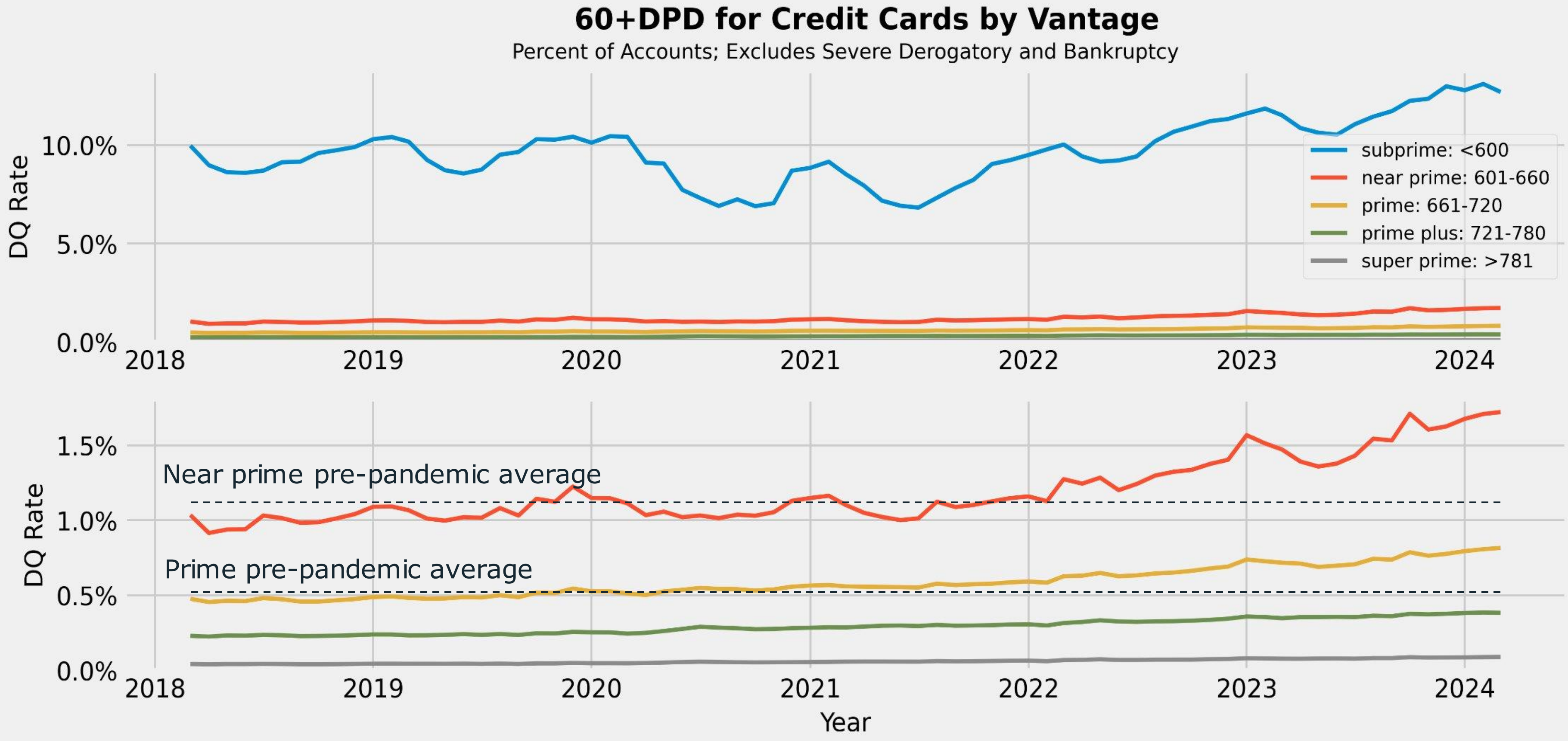
Delinquencies decreased 5% MoM in March 2024, compared to 2.6% last year.



Source: 2OS, Equifax Ignite. Data as of March 31, 2024.

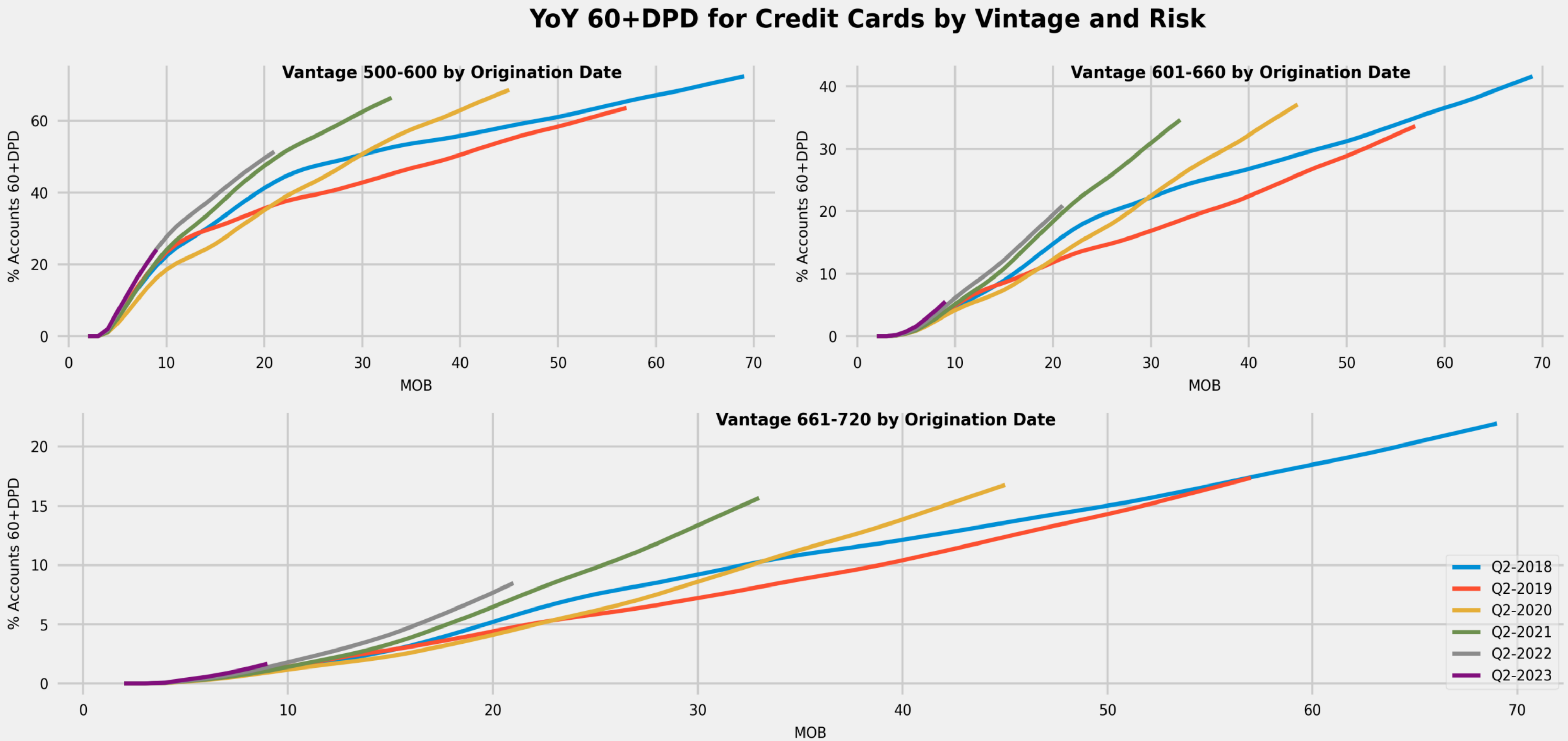
Delinquencies have flattened in the recent quarter for Subprime

March improvement is mostly driven by Subprime



Source: 2OS, Equifax Ignite. Data as of March 31, 2024.
Vantage buckets are lagged 3 months from the performance date.

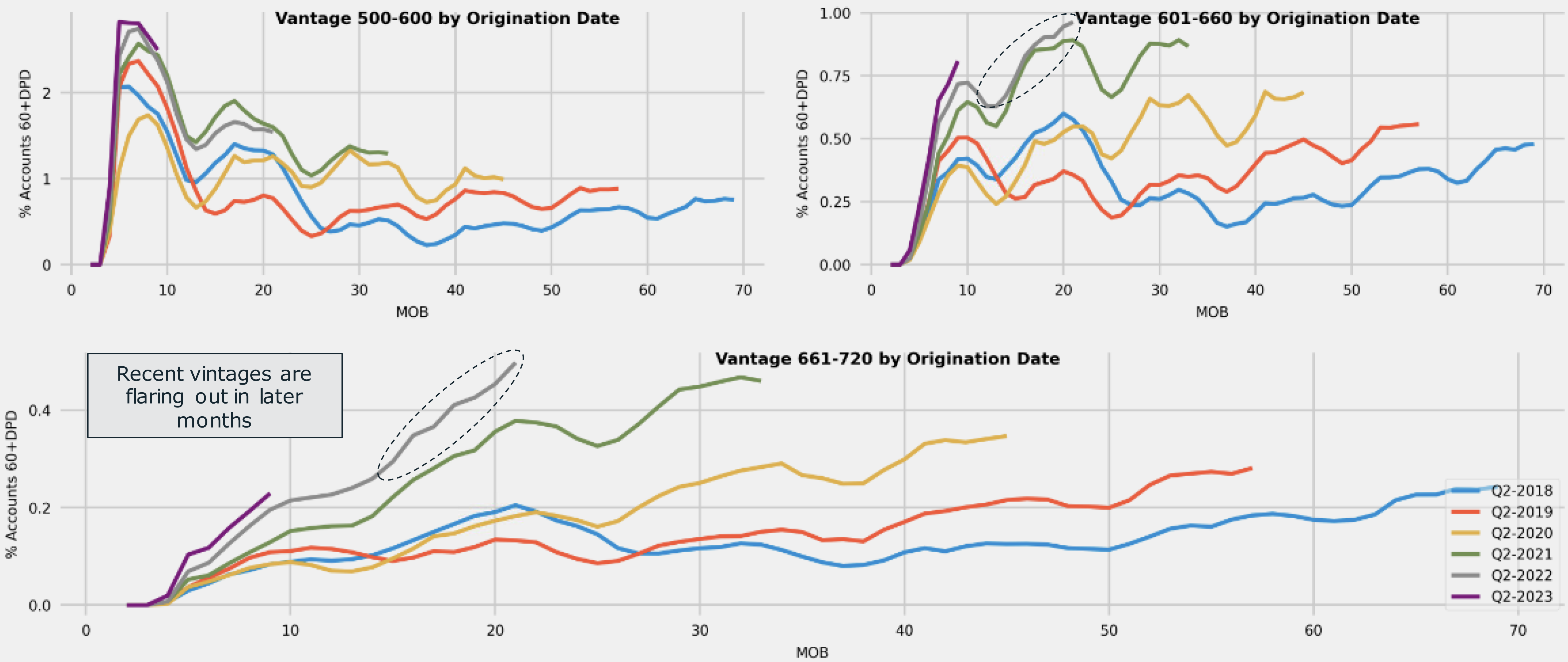
The performance of recent vintages is in line with the previous year, adjusting for origination risk scores



Note: There has been a recent mix shift toward higher vantage score originations, explaining why overall risk can stay flat despite no risk band improvements
Source: 2OS, Equifax Ignite. Data as of March 31, 2024.

Looking at performance on a per open basis makes the worsening across vantage bands clear

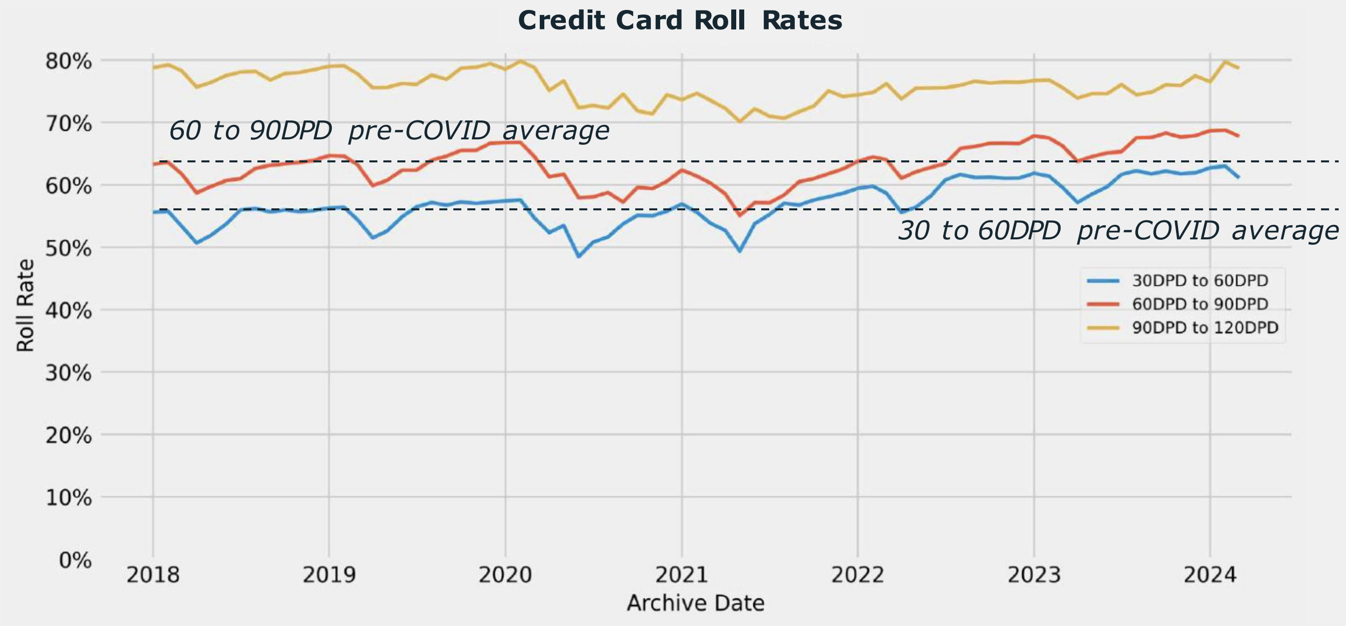
YoY 60+ DPD per open for Credit Cards by Vintage and Risk

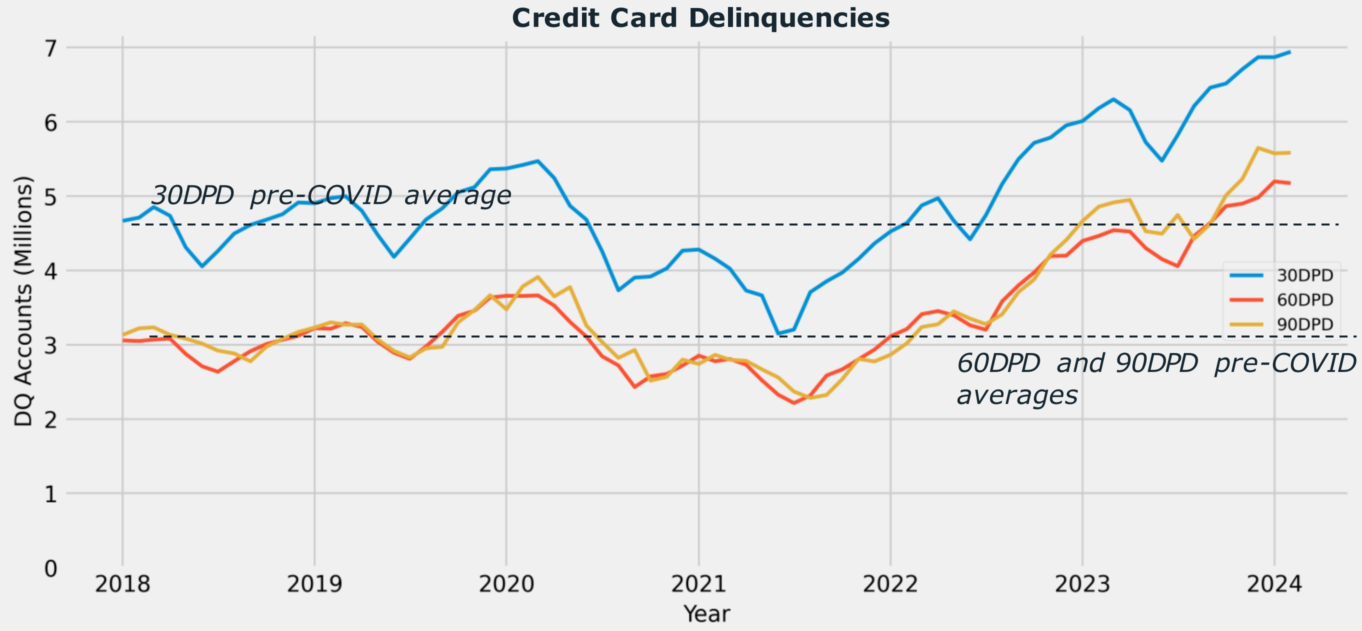


Source: 2OS, Equifax Ignite. Data as of March 31, 2024.

Credit Card roll rates are elevated compared to pre-pandemic but have decreased in last quarter

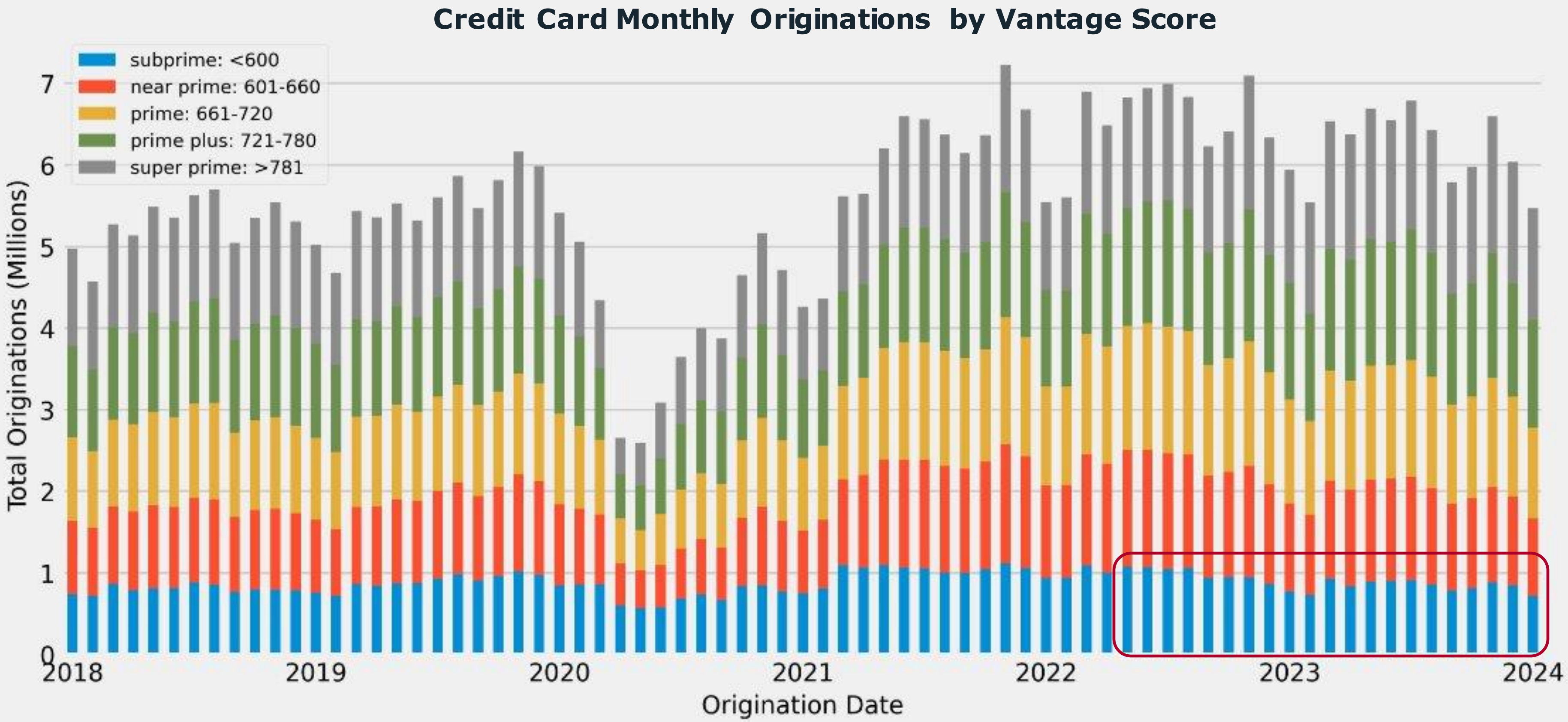
Delinquencies are far above pre-pandemic averages





Source: 2OS, Equifax Ignite. Data as of March 31, 2024.
For more information on methodology, refer to appendix.

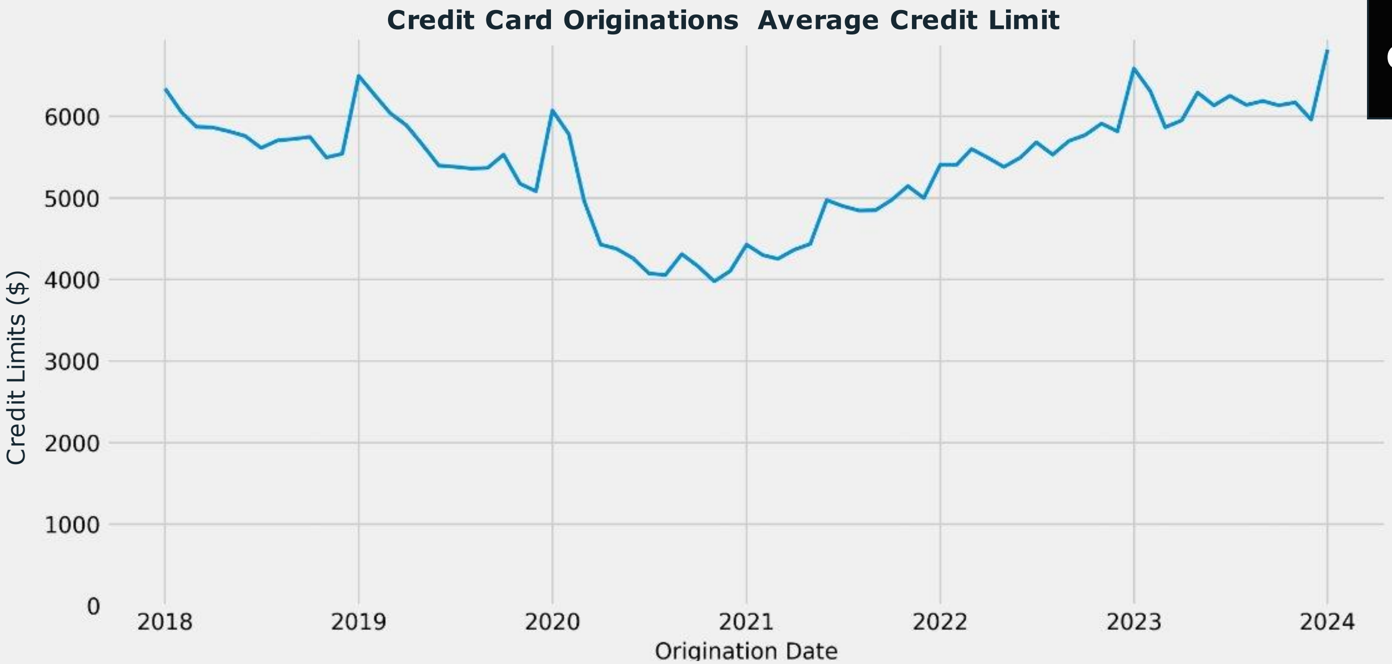
Credit card issuers continue to tighten subprime originations

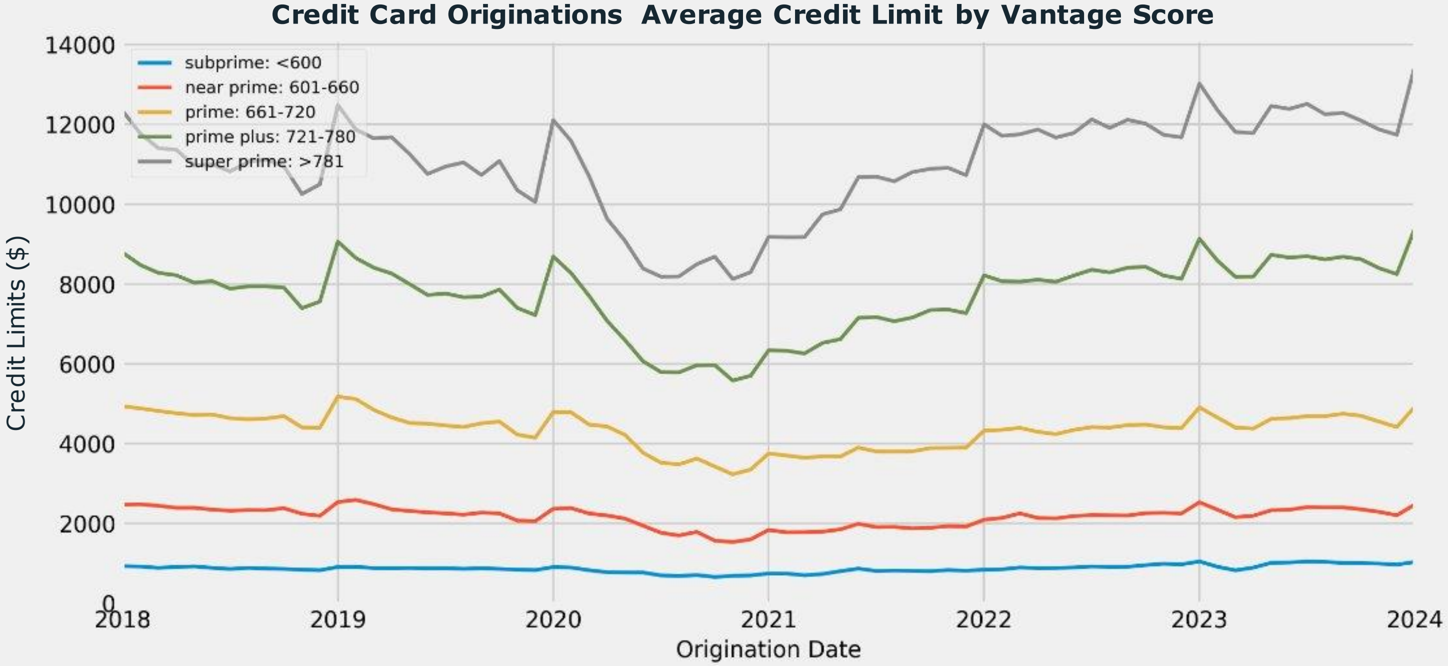


Decrease in subprime originations compared to 2022 levels

Source: 2OS, Equifax Ignite. Originations through December 31, reported as of March 31, 2024.
Vantage buckets at time of origination.

Lenders have increased credit limits across risk bands

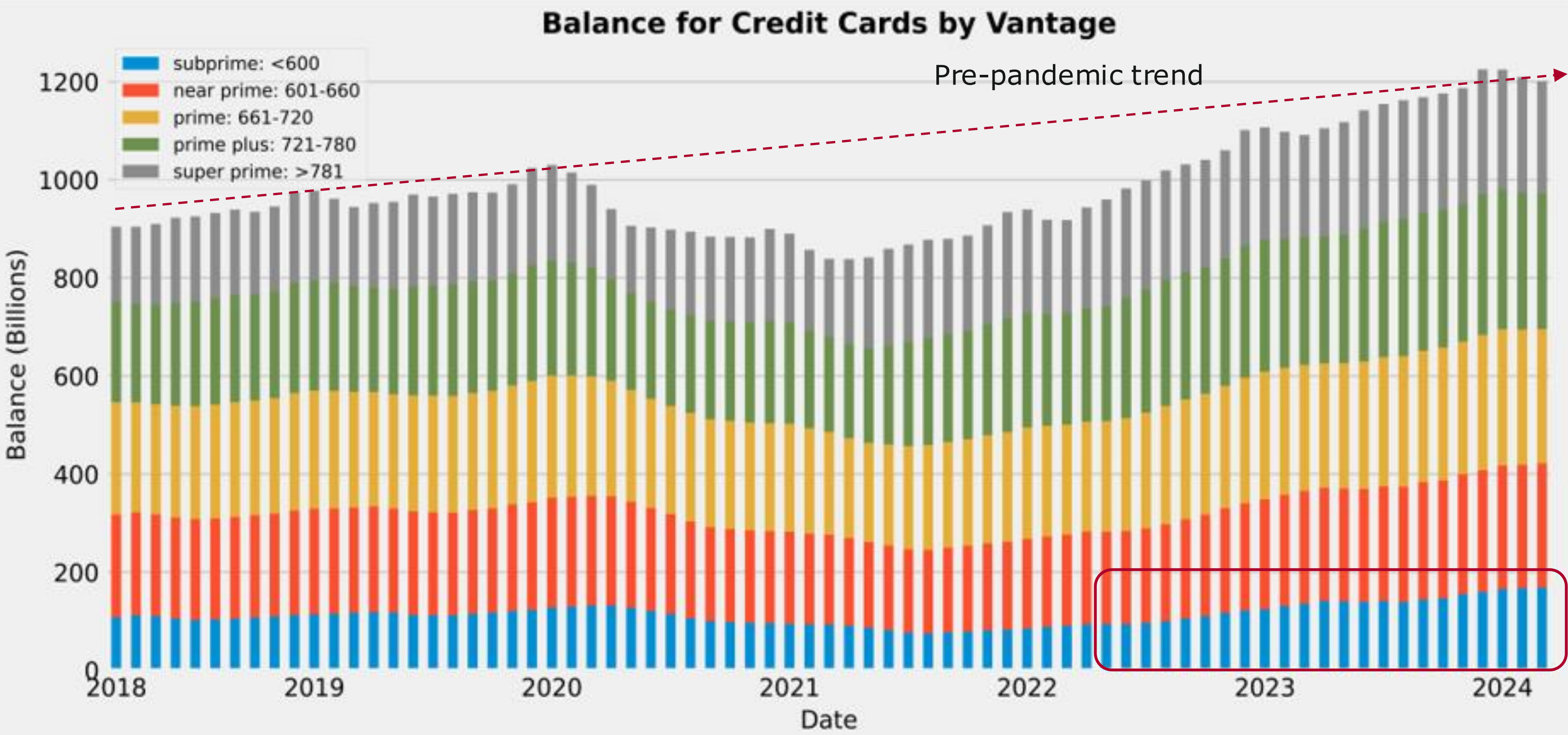




Source: 2OS, Equifax Ignite. Data as of December 31, 2023.
Vantage buckets are lagged 3 months from the performance date. For more details on methodology, see appendix.

Credit card balances have been increasing despite tightening

Credit limit increase has offset tightening, resulting in subprime balance increase since the second half of 2022



Source: 2OS, Equifax Ignite. Data as of December 31, 2023.
Vantage buckets at time of origination.

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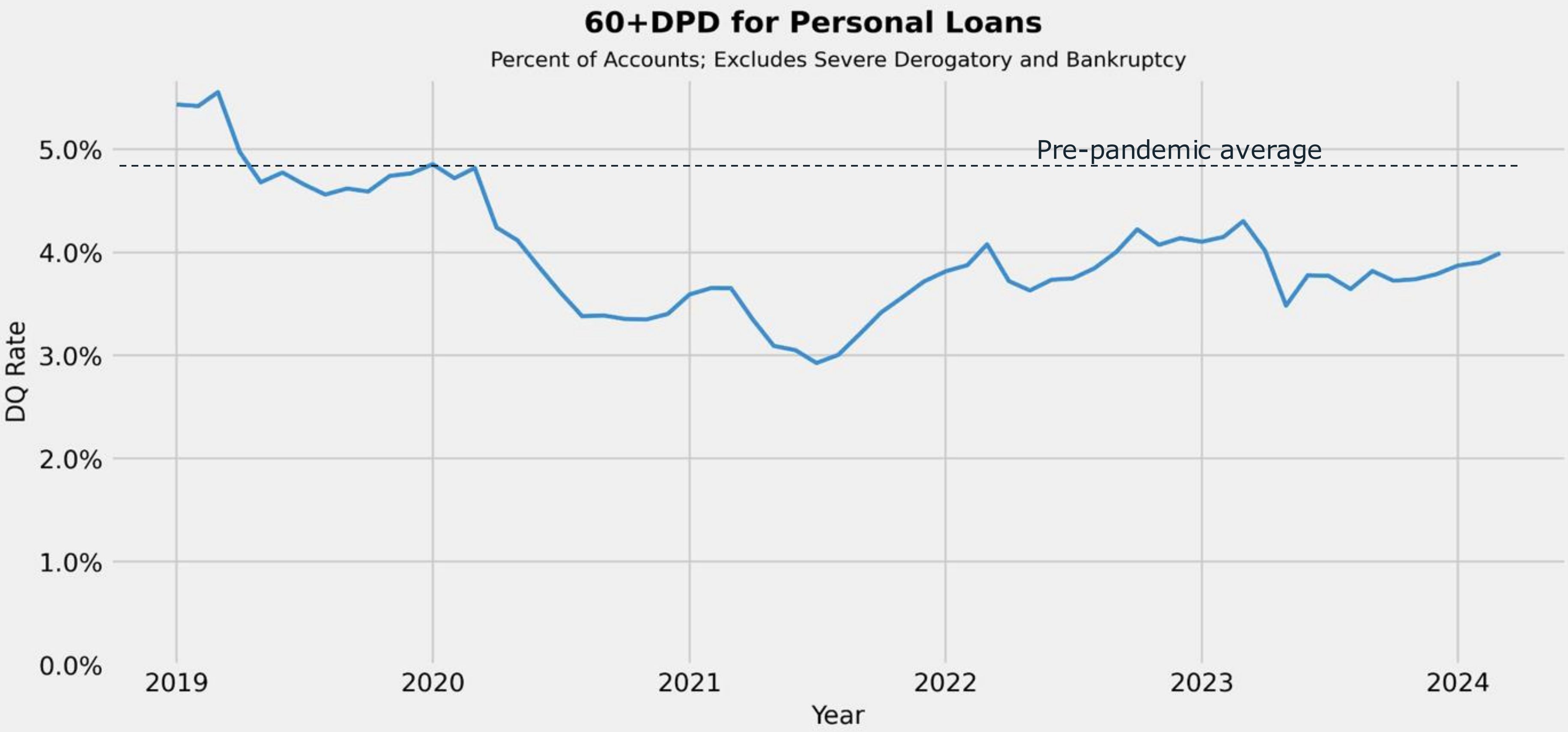
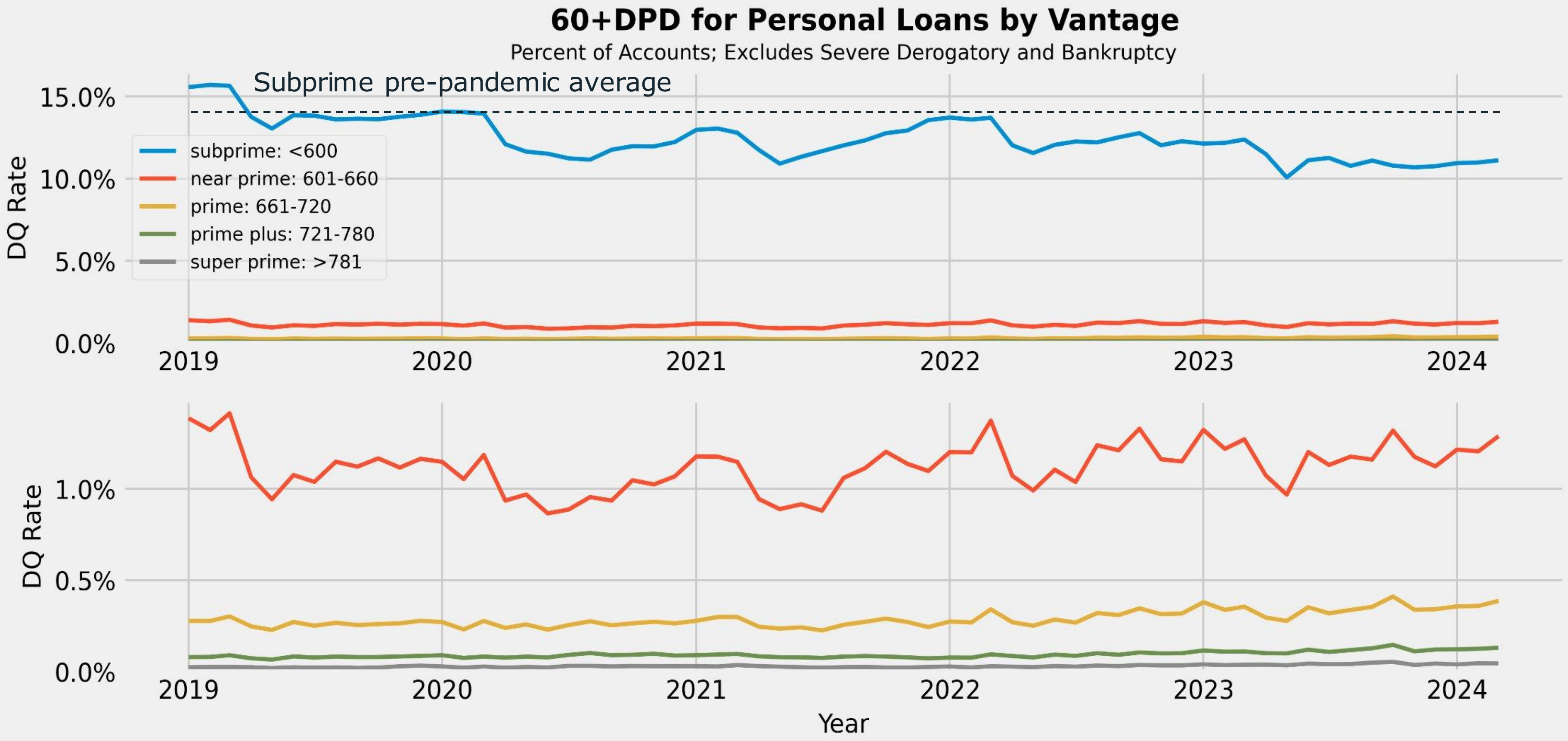
Delinquencies are lower than pre-pandemic averages

There has been a small uptick in the last couple of months



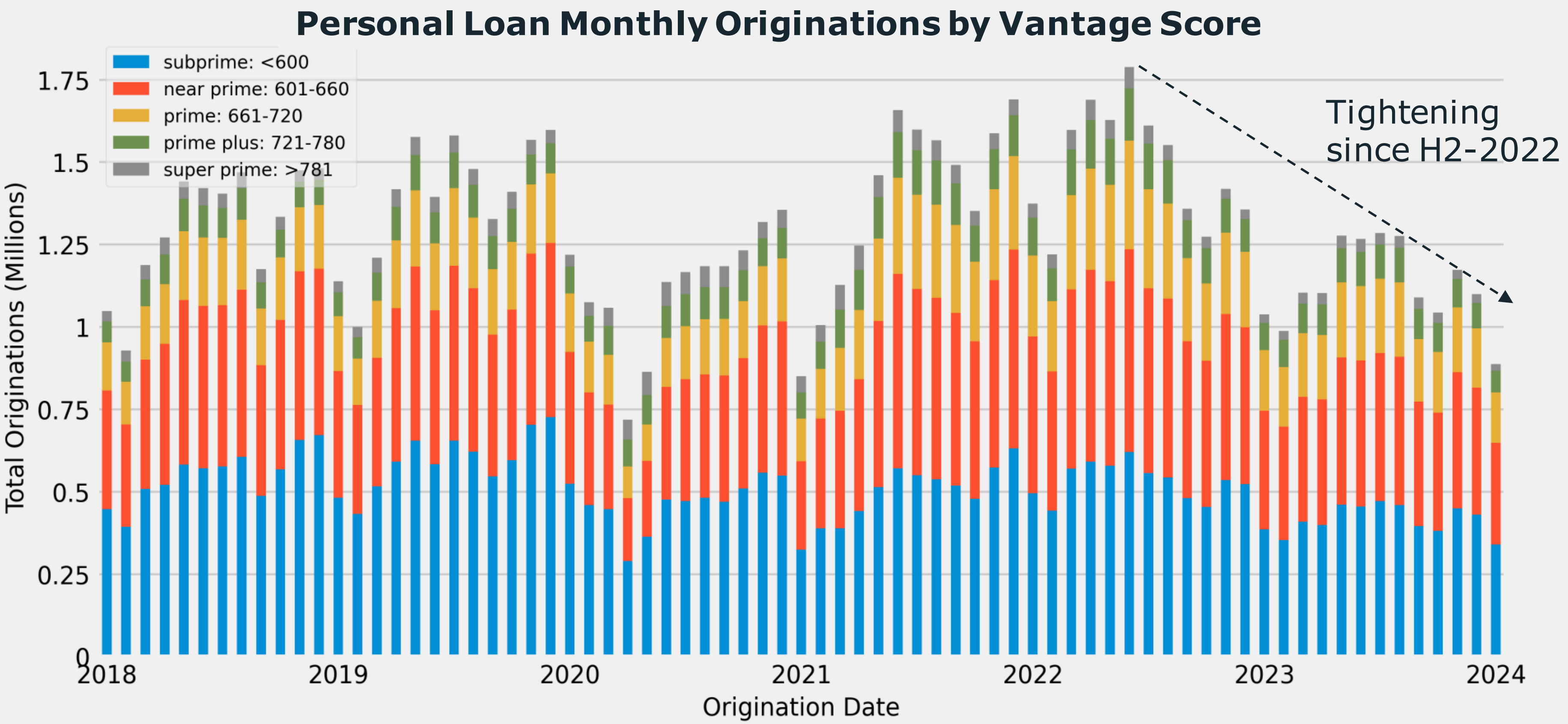
Source: 2OS, Equifax Ignite. Data as of March 31, 2024.

Subprime delinquencies are flat with other risk levels driving the increase



Source: 2OS, Equifax Ignite. Data as of March 31, 2024.
Vantage buckets are lagged 3 months from the performance date. For more details on methodology, see appendix.

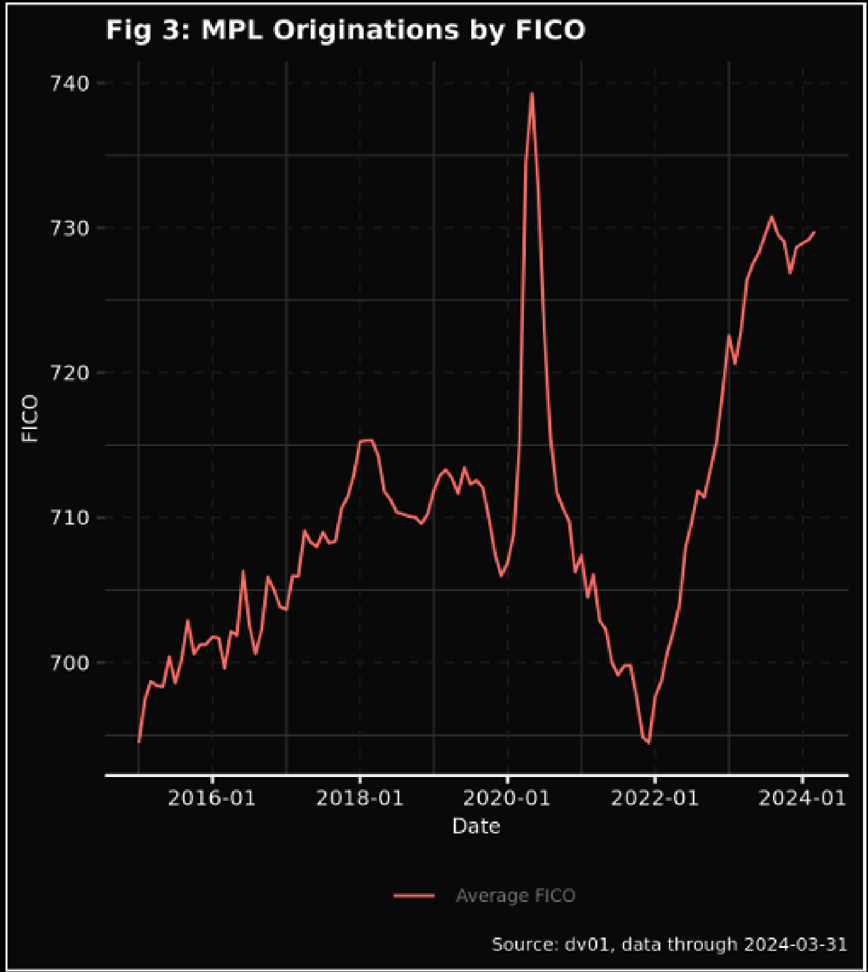
There has been a MoM and YoY decline as rates increase and tightening continues

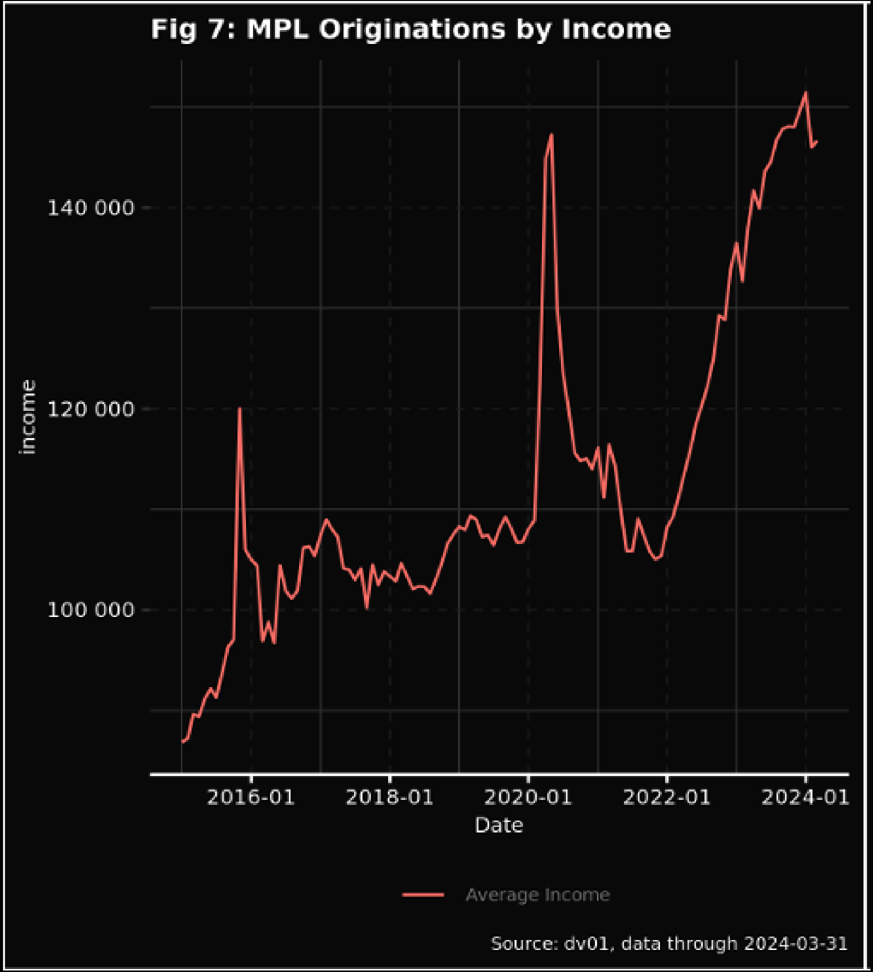


Source: Equifax Ignite. Data as of March 31, 2024, originations as of January 2024.

Avg origination FICO and income remained unchanged in Q1, as tightening rate steadies

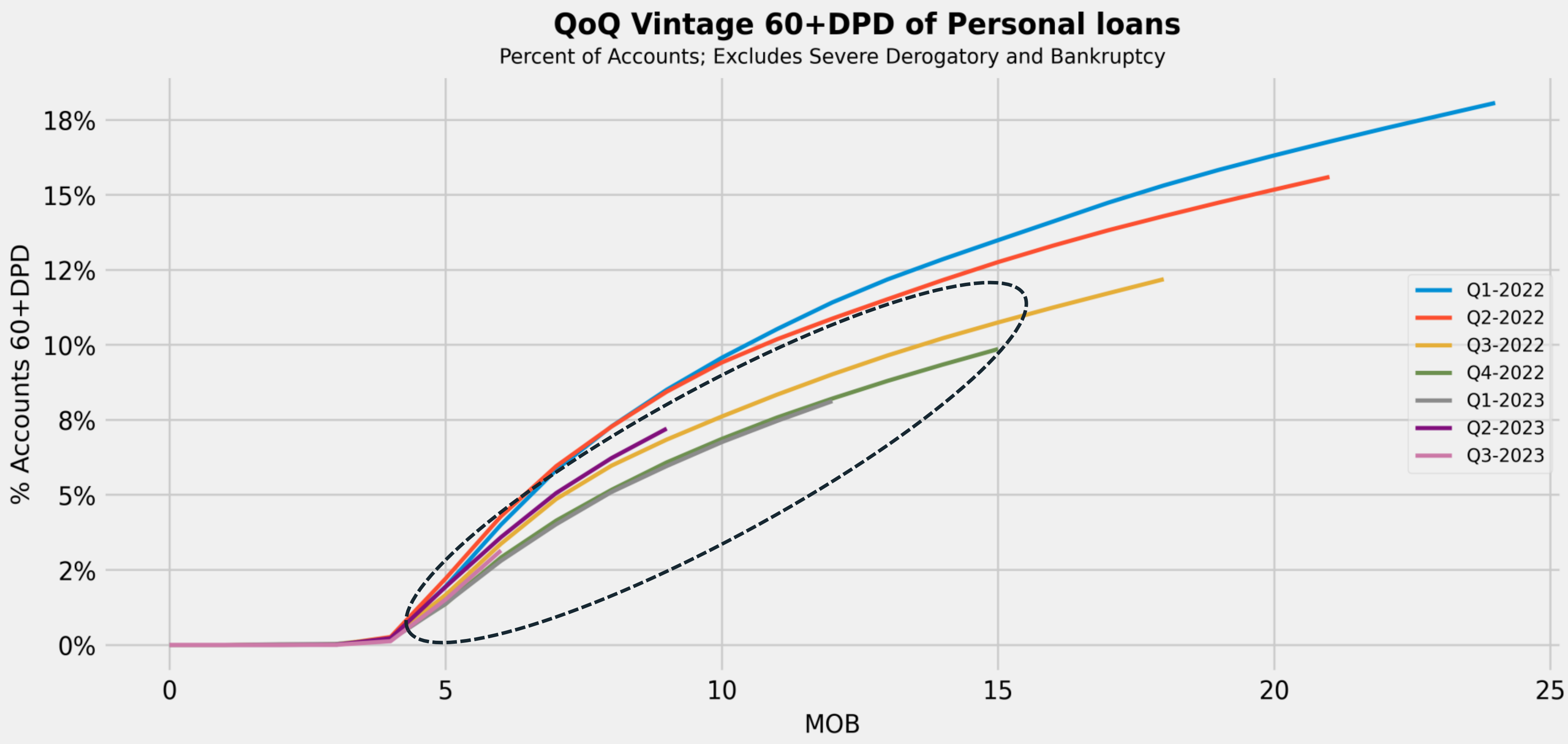
They are still substantially higher than pre-COVID levels





Source: dv01, data as of March 31, 2024

Recent vintages are showing slightly improved performance since tightening in H2-2022

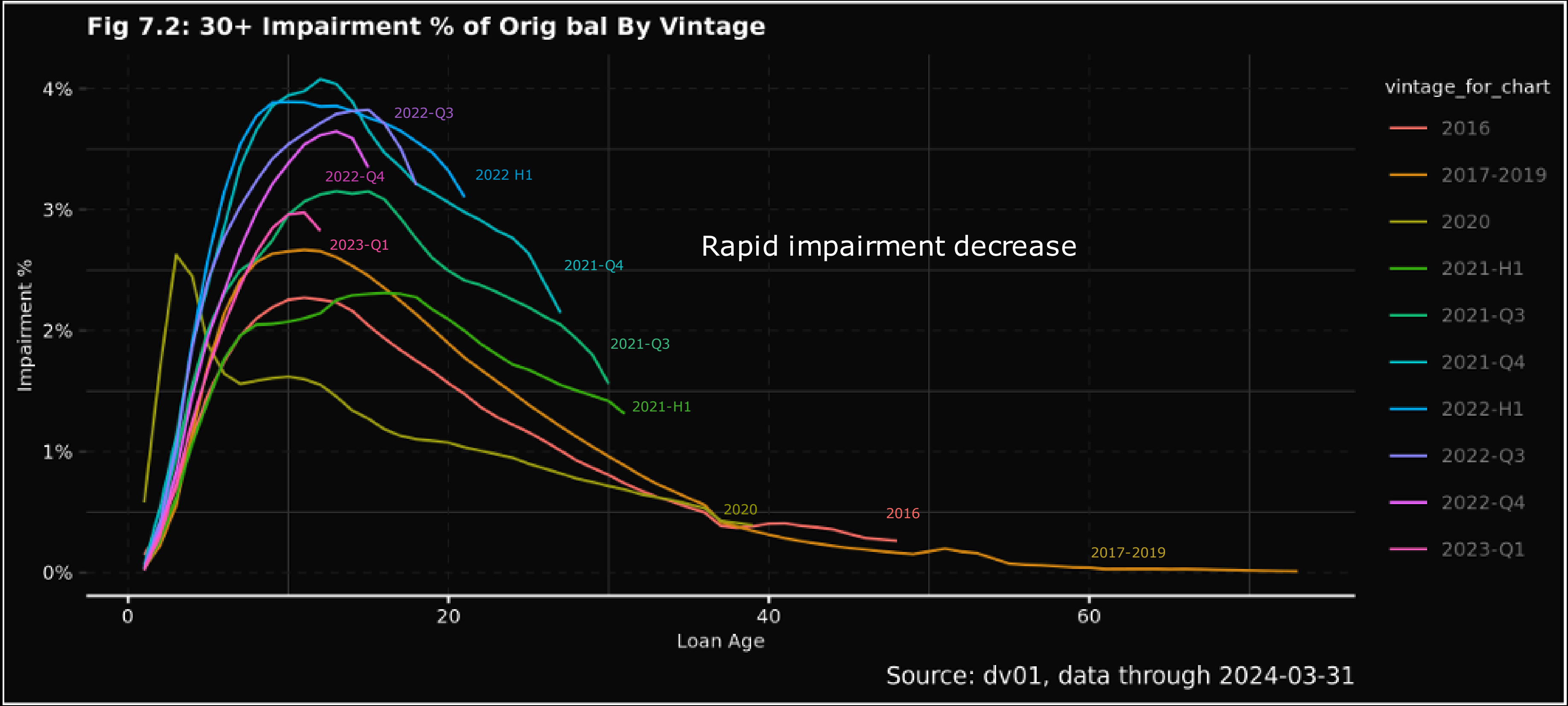


Source: 2OS, Equifax Ignite. Data as of December 31, 2023.
Vantage buckets are lagged 3 months from the performance date. For more details on methodology, see appendix.

Pre-tightening vintages are showing signs of more widespread performance improvement

Post-tightening vintages reached impairment peaks sooner, in line with pre-COVID

Impairment = DQ + Modification



Source: dv01, data as of March 31, 2023

Prepayments rose slightly above seasonal trends in March.

FICO continues to be a clear differentiator in prepayment behavior

Fig 6.1: CU: Prepayment (CPR)

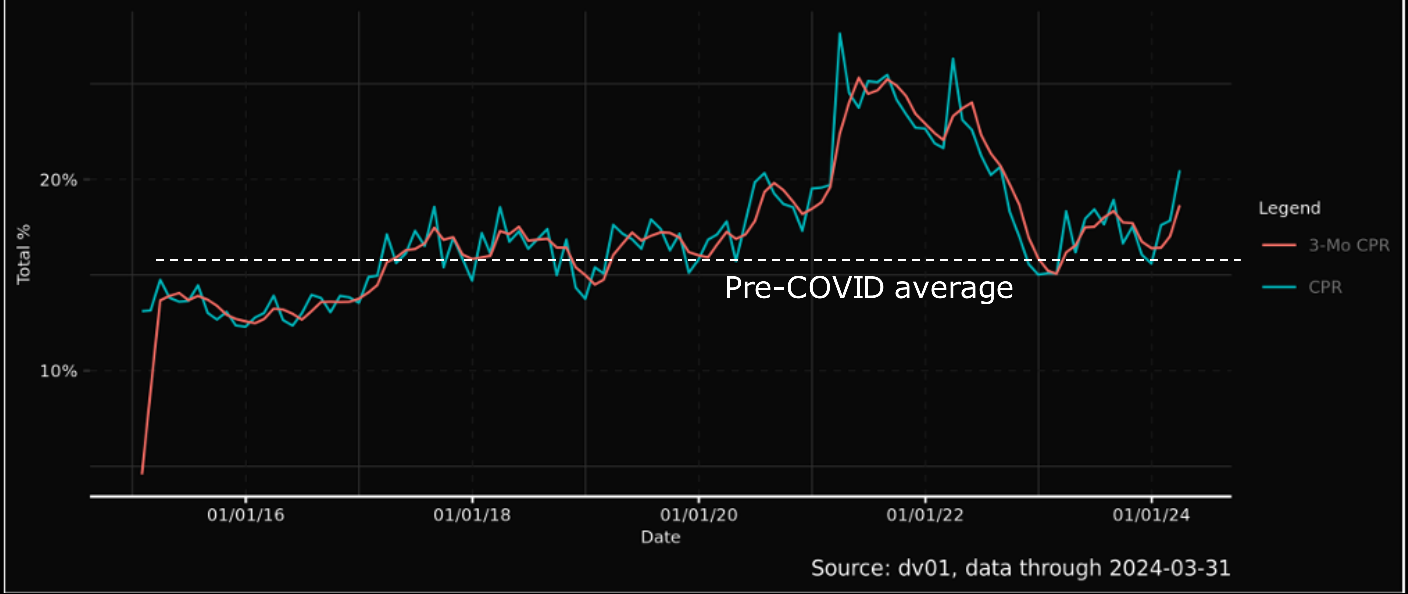


Fig 6.4: CU: CPR by FICO

Source: dv01, data as of March 31, 2024

- State of the Consumer
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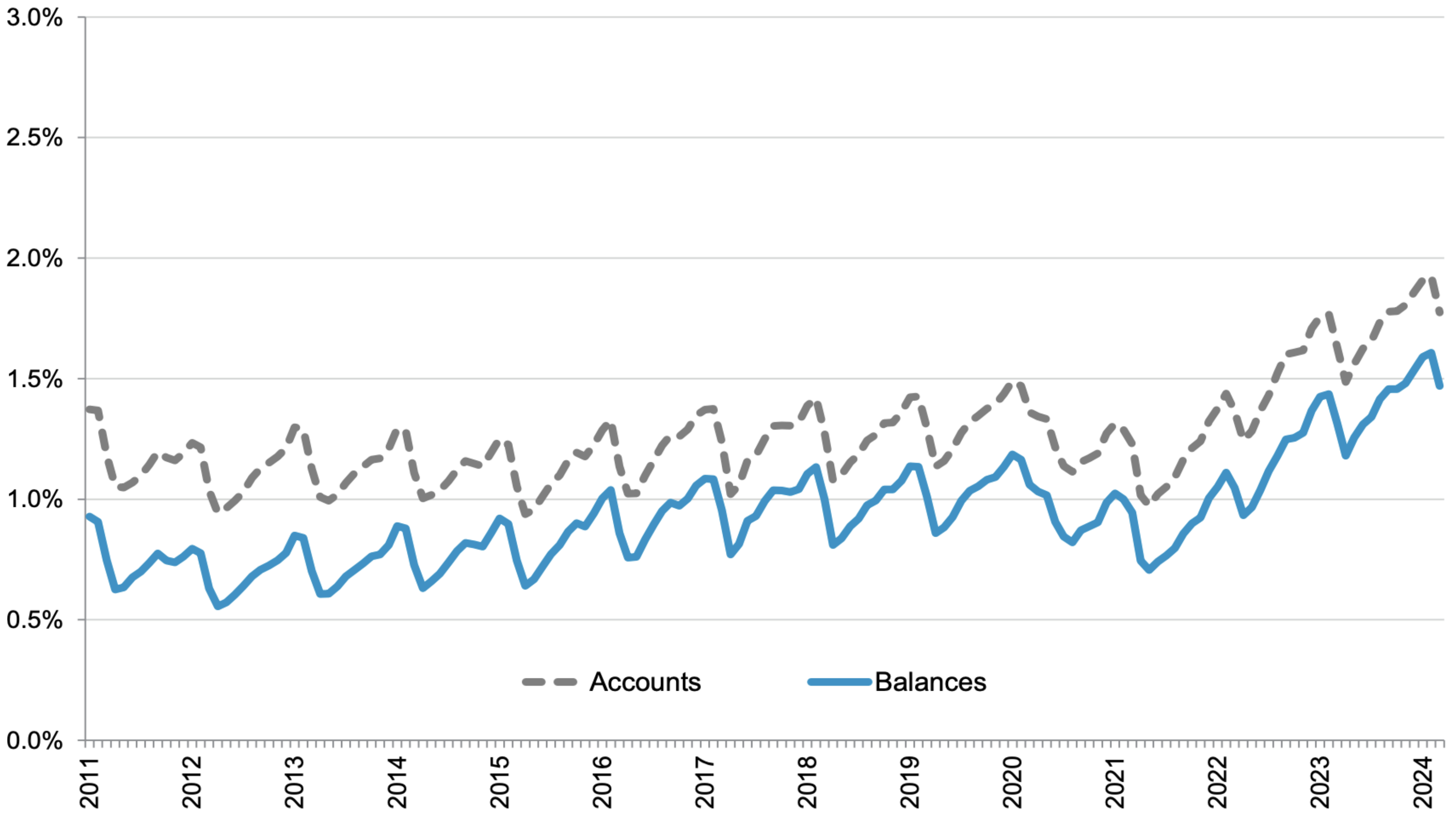
Delinquencies are continuing to rise and are above pre-pandemic levels

Severe Delinquency Rate

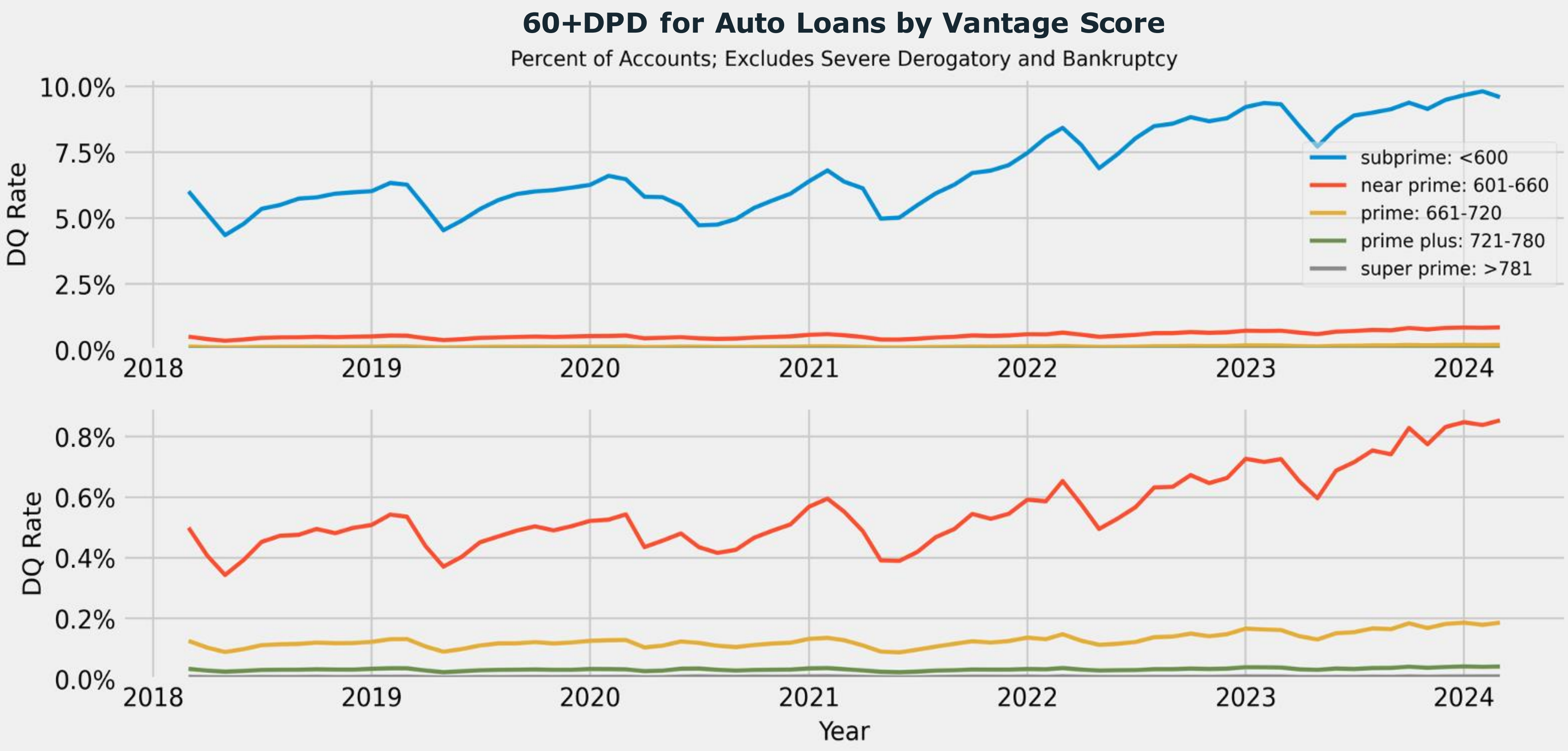
60+ Days Past Due
Percent of Accounts and Balances; NSA; Excludes Severe Derogatory and Bankruptcy



Source: Equifax Inc.

Data as of March 2024

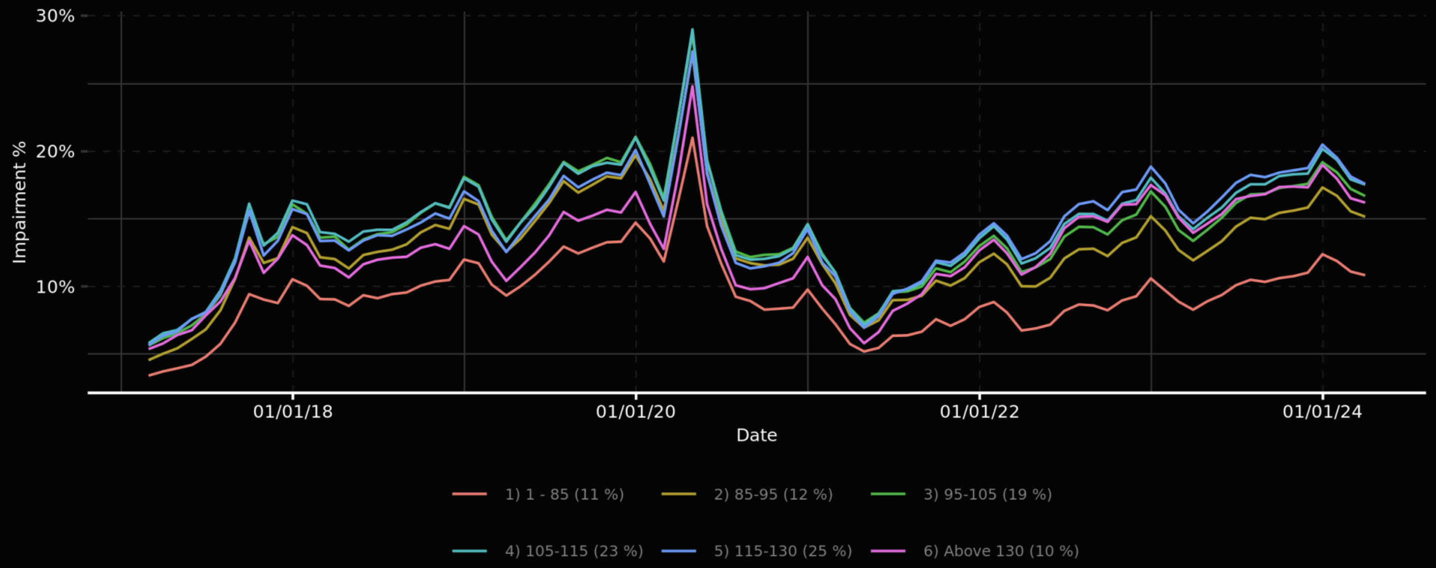
Delinquencies remain elevated across risk bands, though subprime decreased slightly in March



Source: 2OS, Equifax Ignite. Data as of March 31, 2024.
Vantage buckets are lagged 3 months from the performance date. For more details on methodology, see appendix.

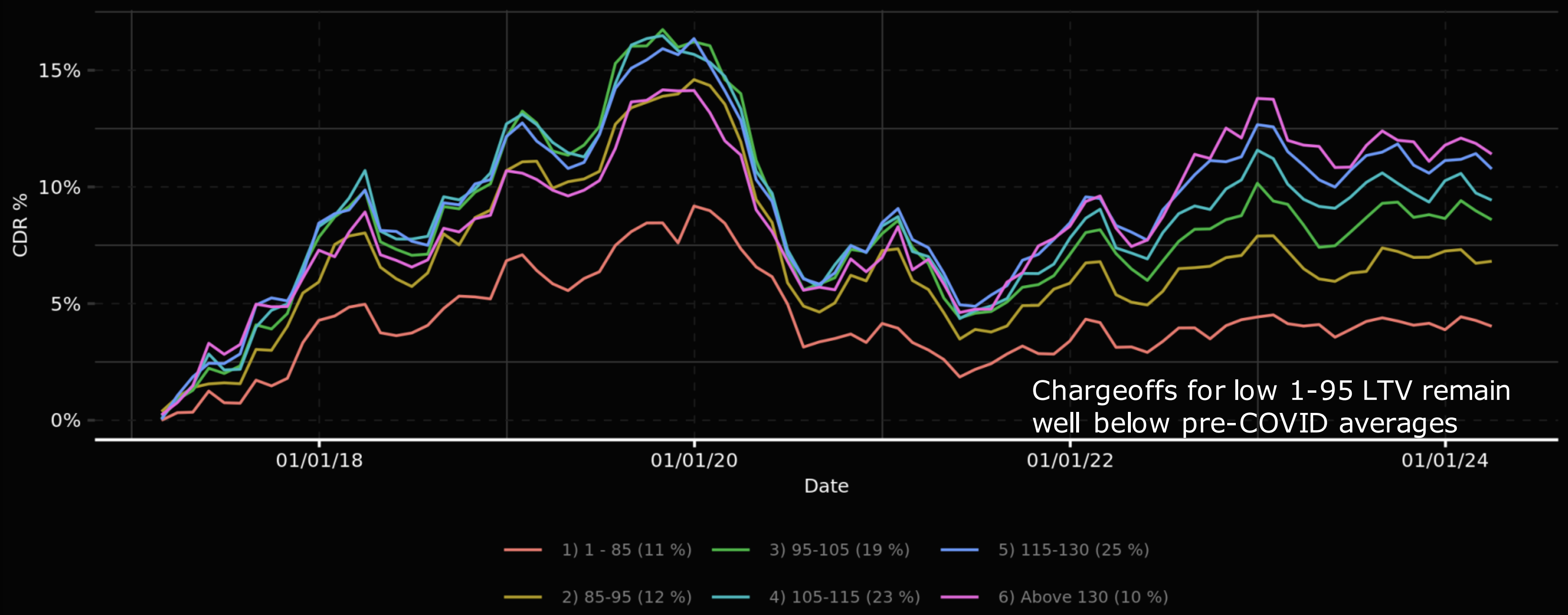
LTV continues to be a key differentiator in impairment and charge-offs

Fig 10.3: Auto: 30+ Impairment % by LTV



Source: dv01, data through 2024-03-31

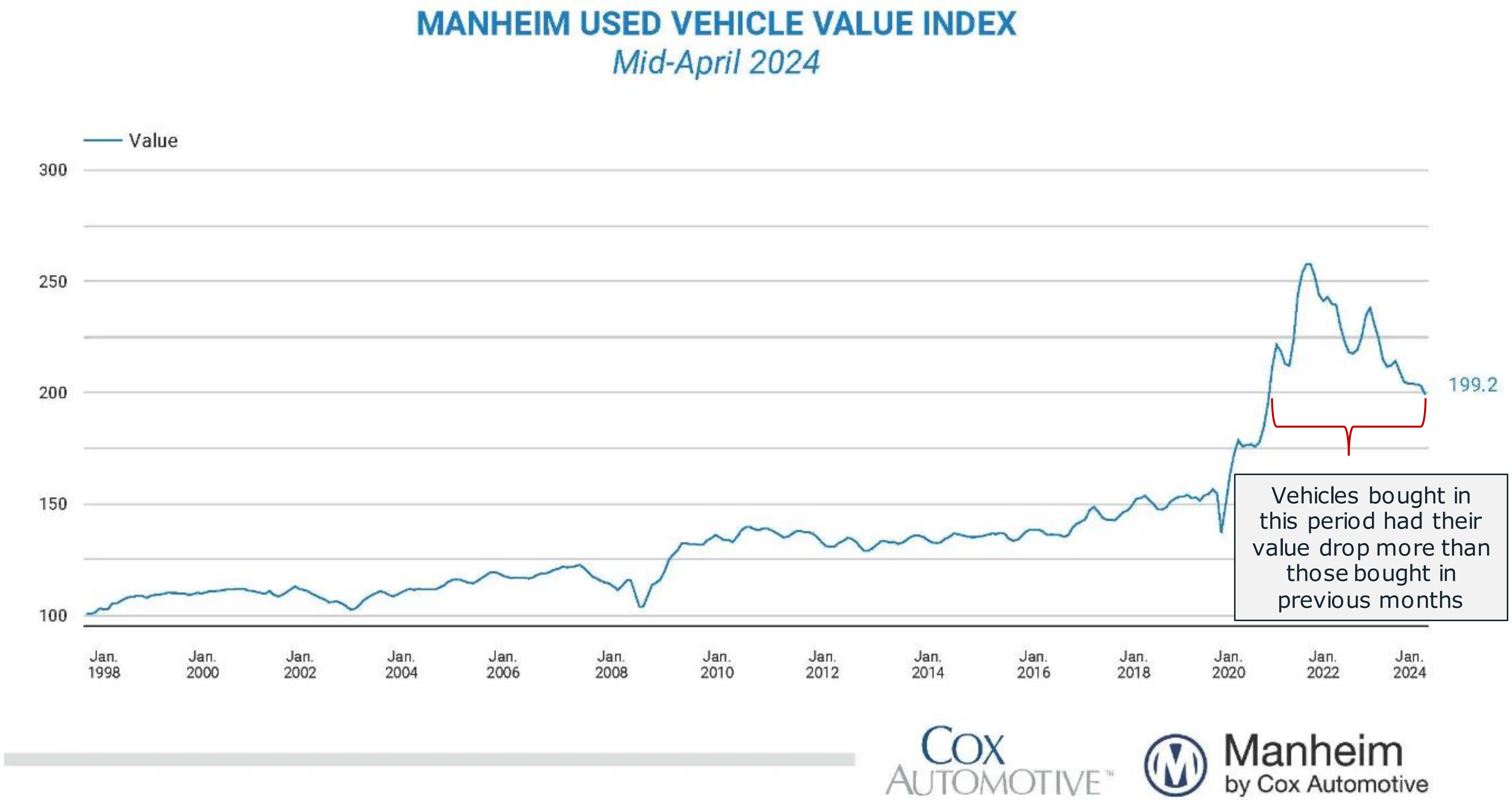
Fig 11.2: Auto: CDR by LTV



Source: dv01, data through 2024-03-31

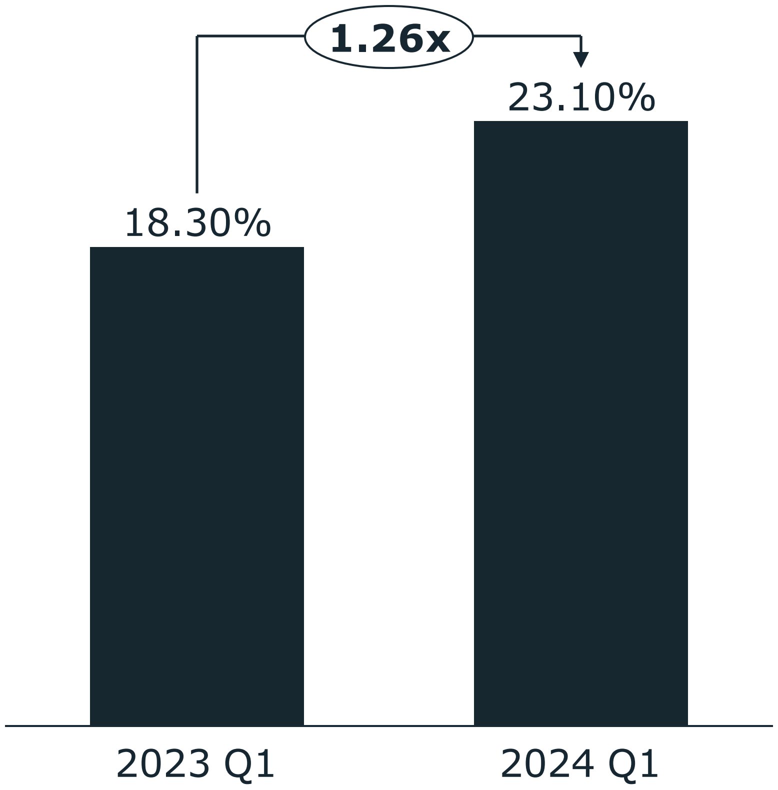
Source: dv01, data as of March 31, 2024

The historically elevated used-vehicle prices have started decreasing since the second half of 2023, affecting trade-in values for vehicles bought in the pandemic

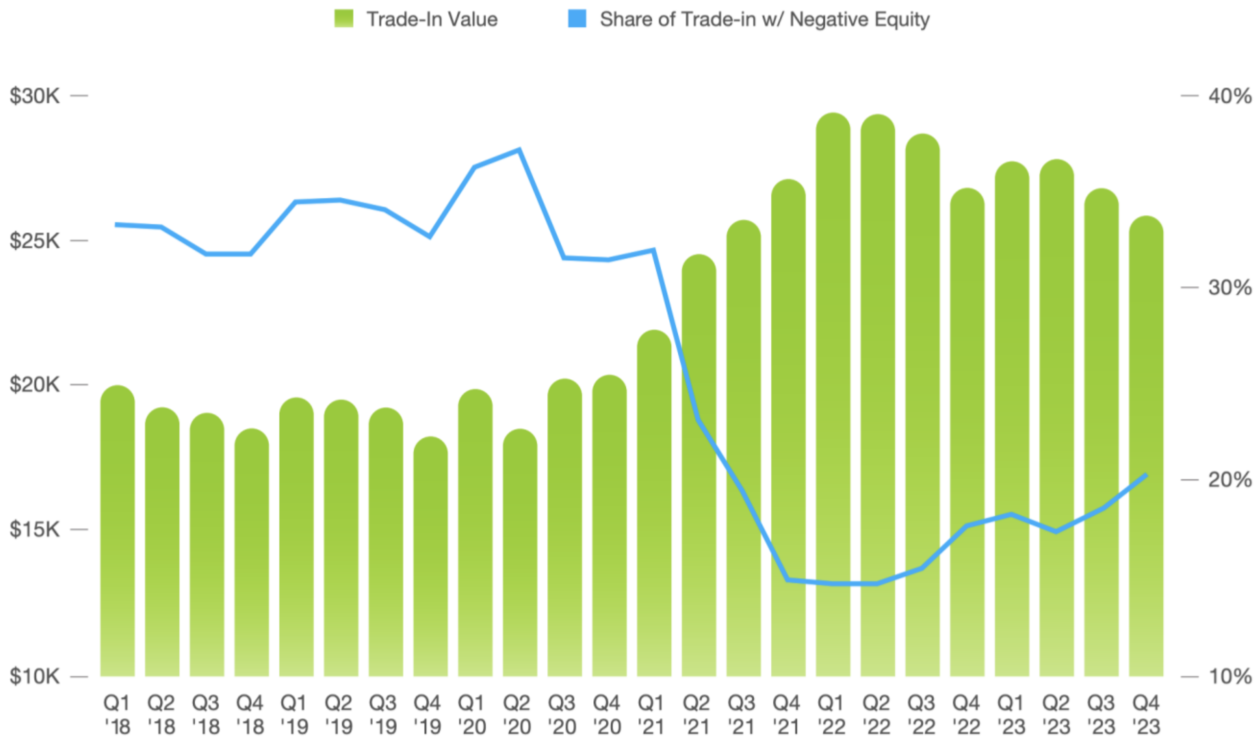


As the value of used cars falls, the share of trade-ins with negative equity is increasing

Share of new-vehicle purchases involving trade-ins with negative equity



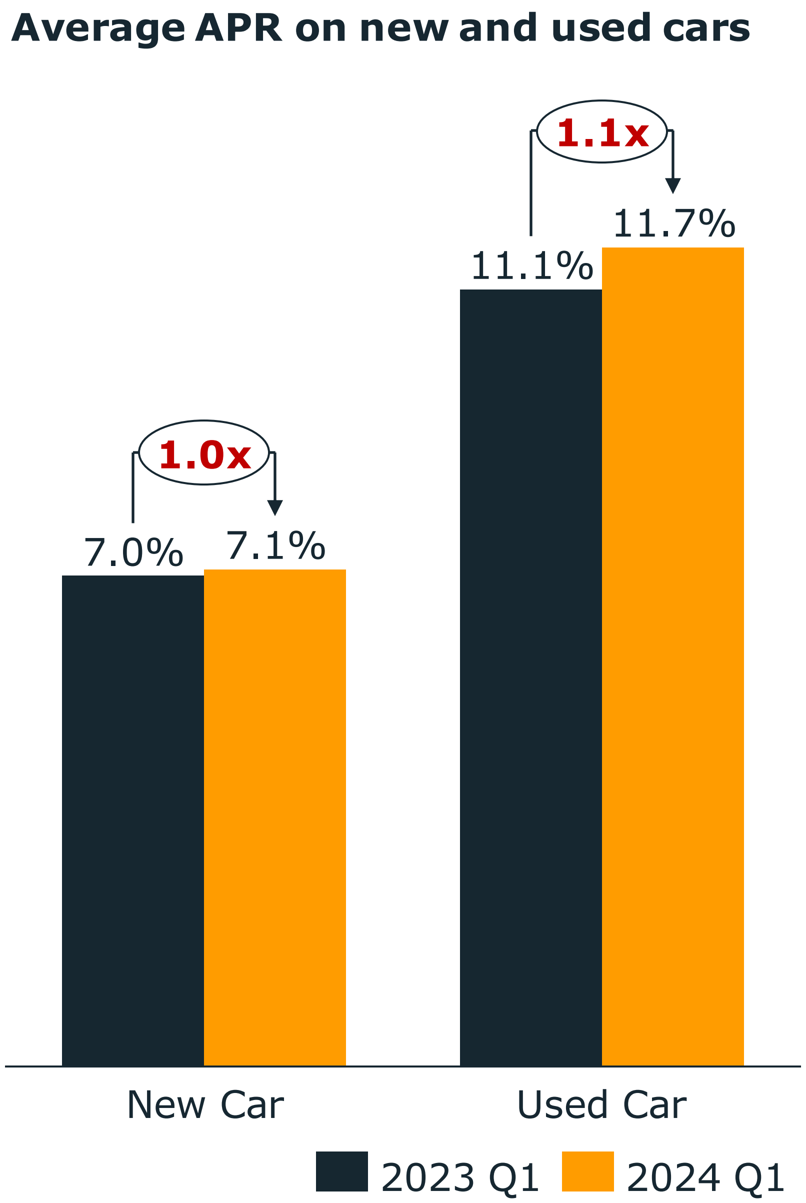
Trade-in Values and the share of trades with Negative Equity

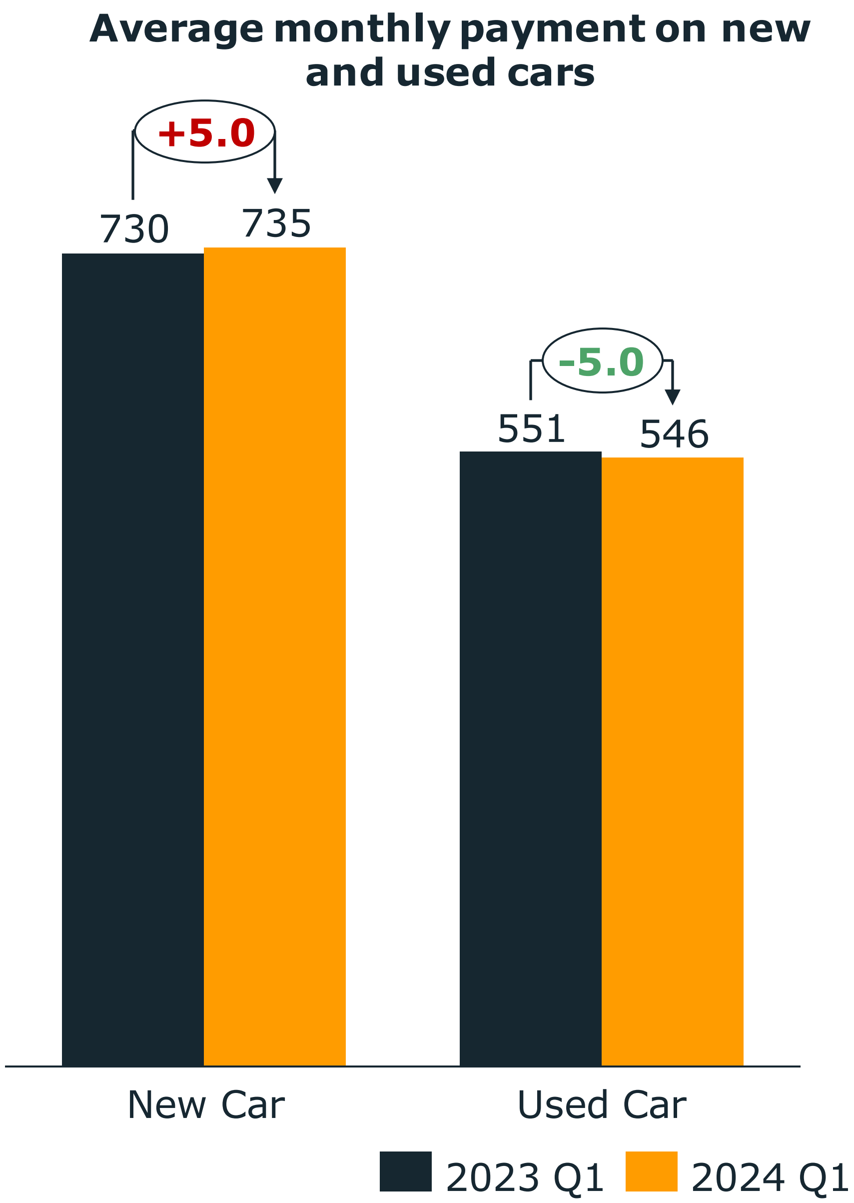


Despite trade-in values being at decade-level highs, the share of trade-ins with negative equity is rising, but still below pre-pandemic levels, as more consumers are trading in vehicles purchased at high prices during the pandemic.

Source: Edmunds, data as of April 2, 2024

Despite higher interest rates for used car loans, monthly payments are roughly flat





Source: Edmunds, data as of October 3, 2023

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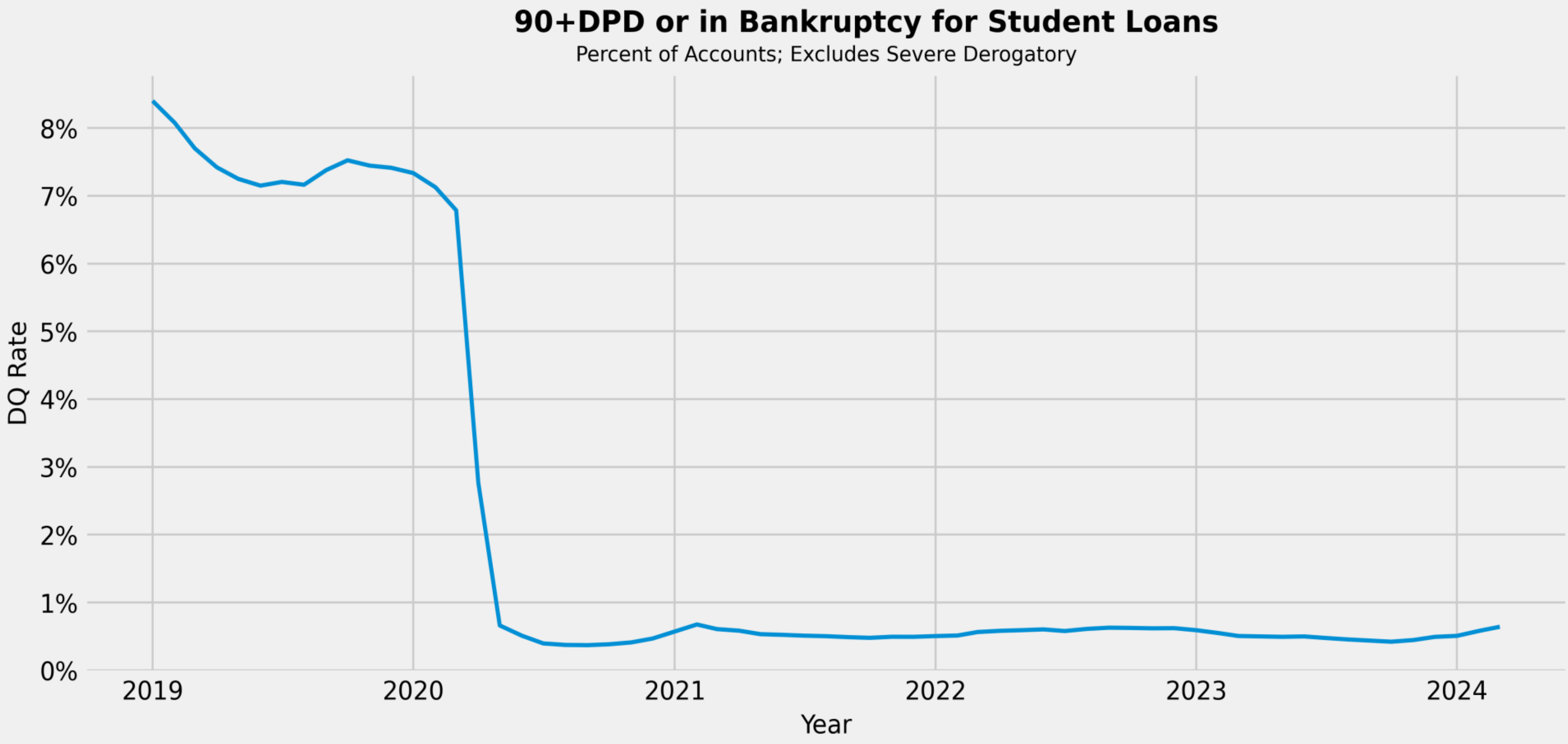
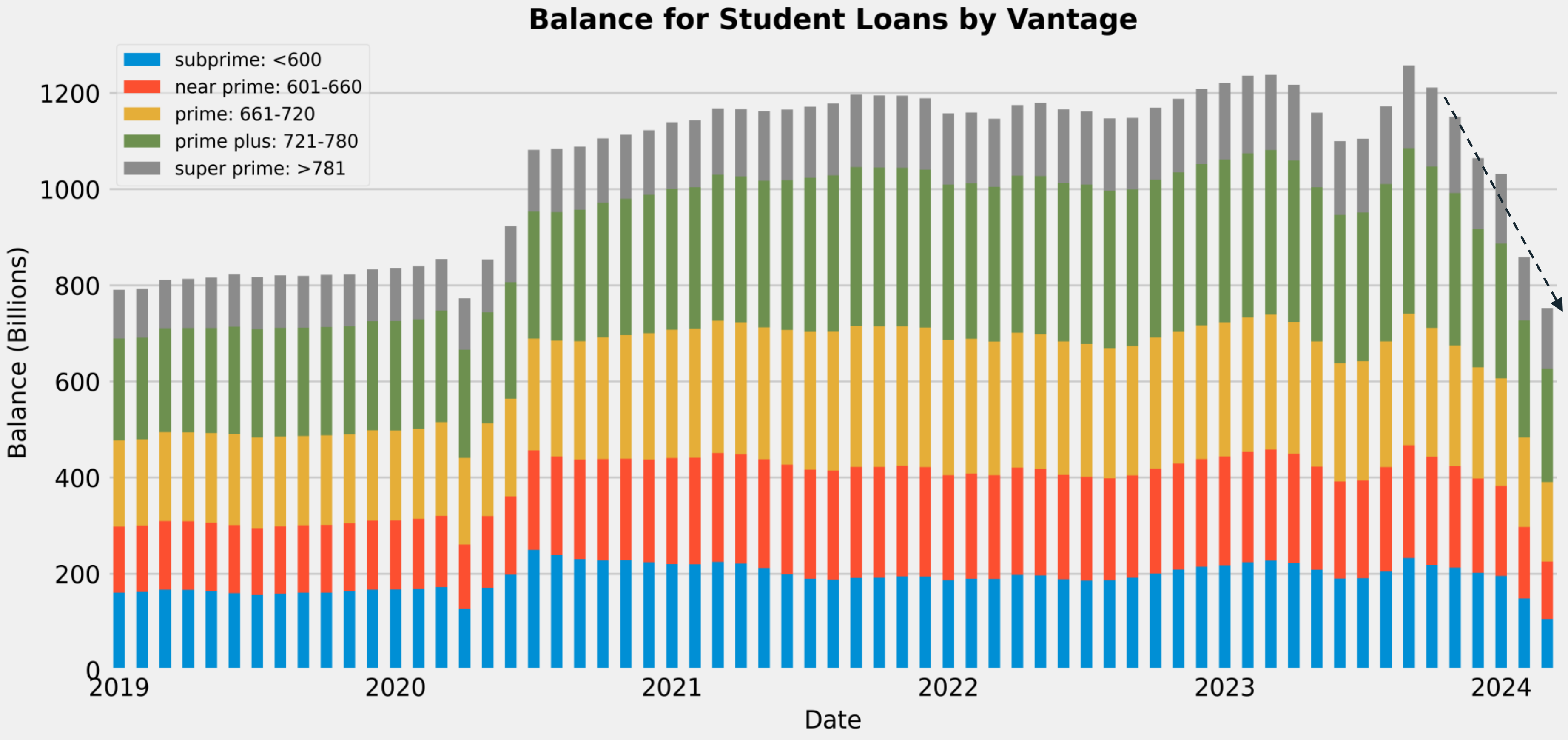
Federal SLs resumed payments in September 2023. However, issuers will not start reporting delinquencies to bureaus until September 2024



Source: 2OS, Equifax Ignite. Data as of March 31, 2024.

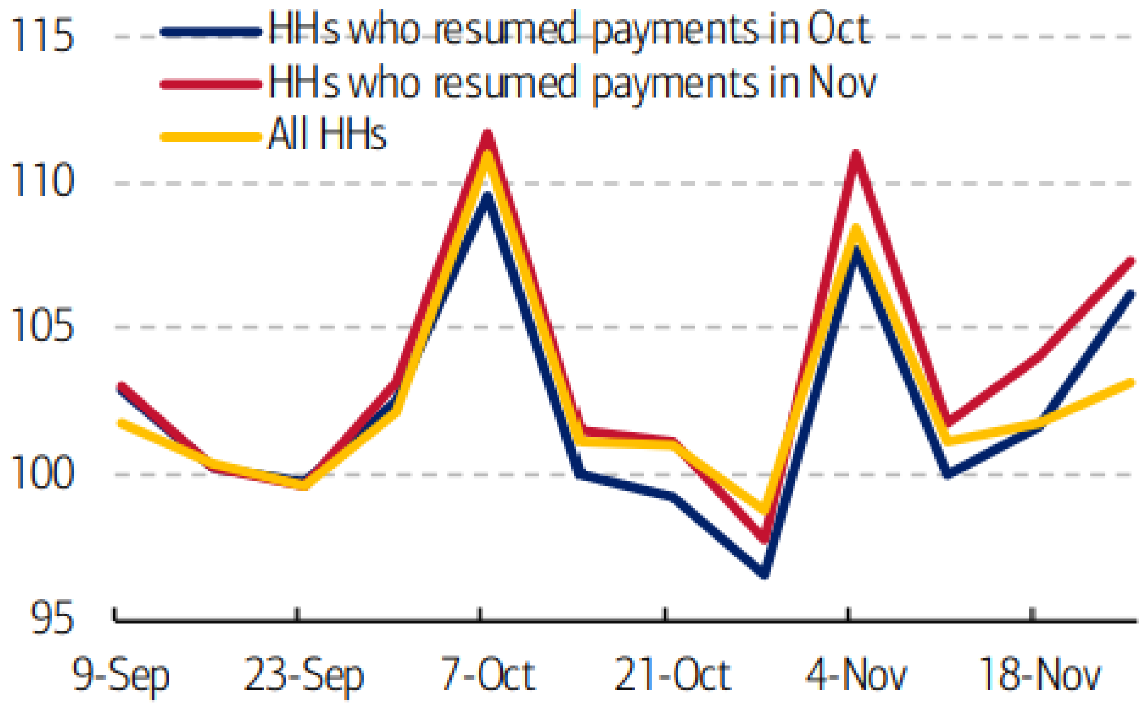
Data suggests massive paydown of loans, we are working to validate



Source: Equifax Ignite. Data as of March 31, 2024.

There does not yet appear to be a difference in spending for households who resumed SL payments

Weekly Card Spending per Household (HH) by Student Loan Repayment Start



(y-axis is an index: 14-day average ending Sep 23 = 100 for each group)

Source: BoA Dec'24 Consumer Checkpoint

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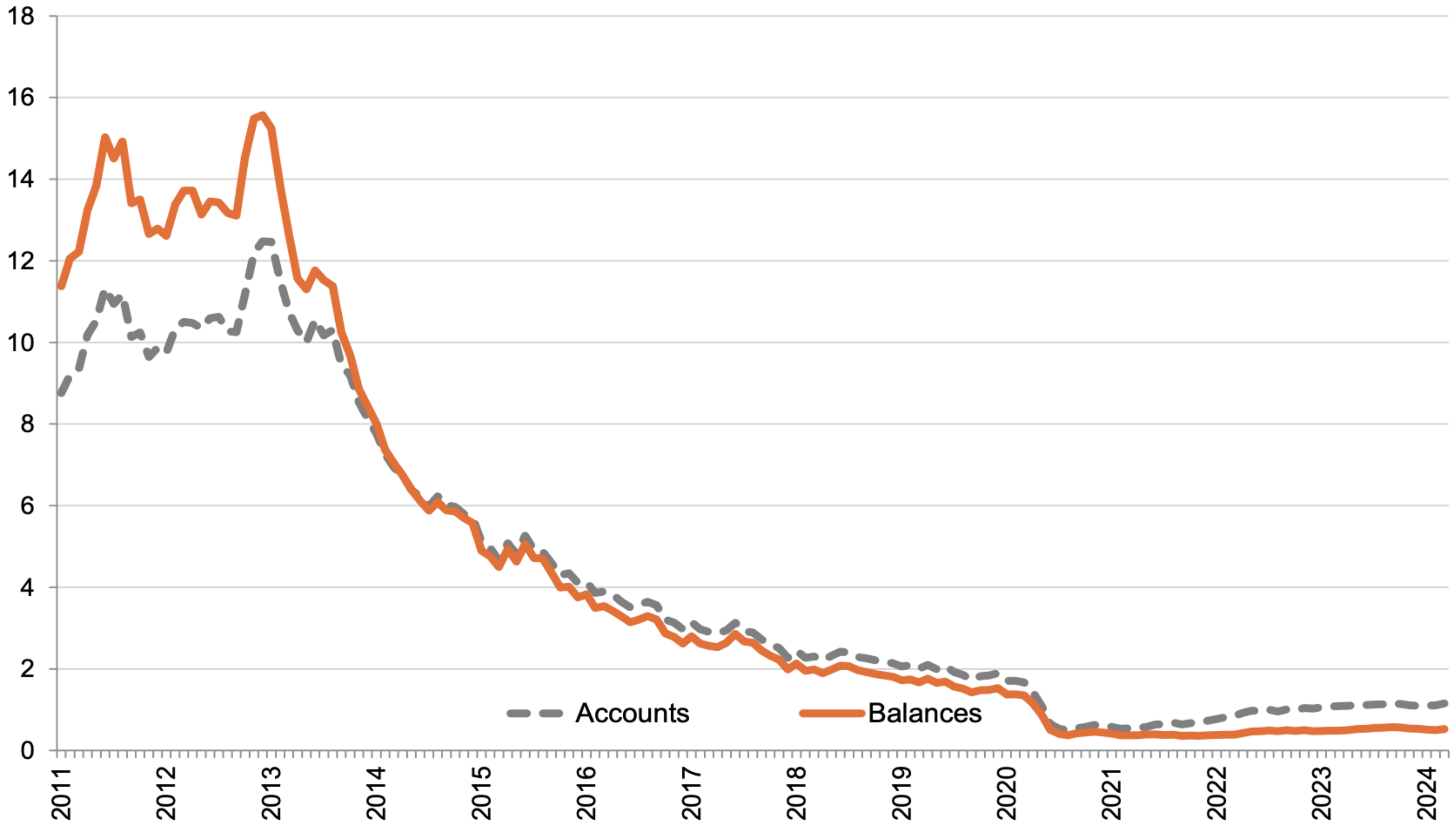
Write-off rates remain much lower than pre-pandemic averages, but are trending higher in the last several months

Write-Off Rates

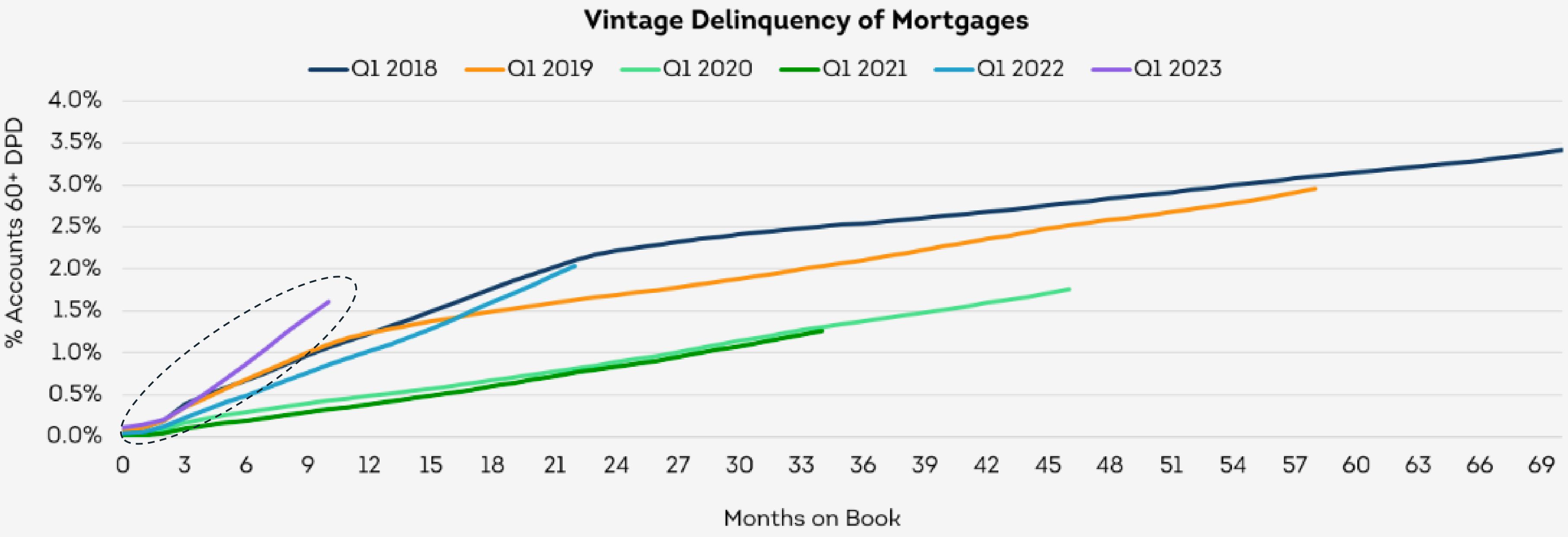
Accounts terminated in Severe Derogatory status
Share of Accounts and Balances in Basis Points; 3-Month Moving Average, NSA, Not Annualized
Excludes Bankruptcy



Source: Equifax Inc.

Data as of March 2024

Newer vintages are showing worse performance than pre-pandemic

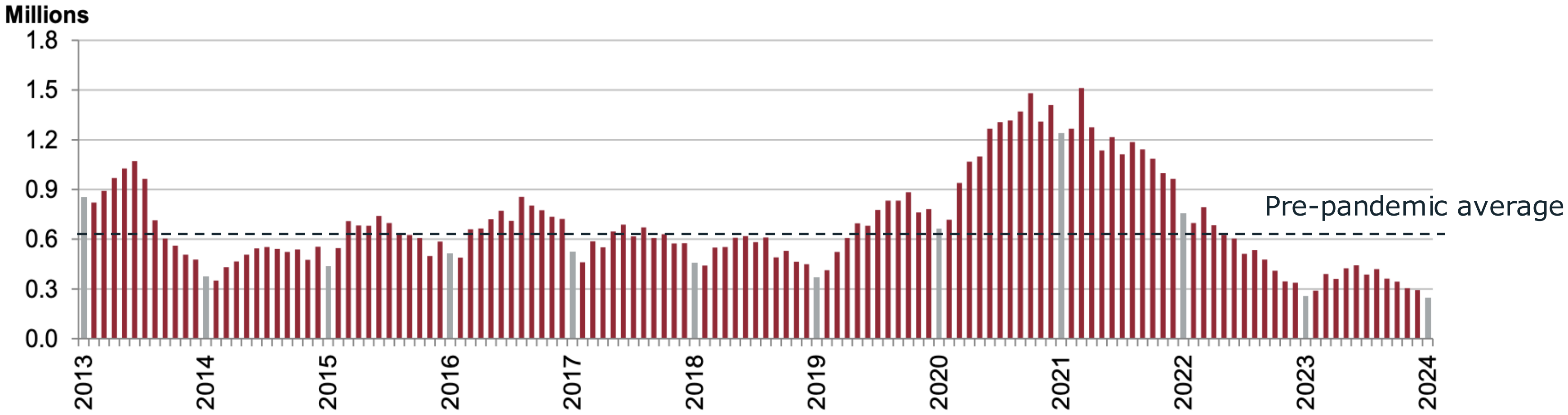


Source: Transunion. Data as of March 31, 2024.

High interest rates lead to mortgage originations well below pre-pandemic averages

First Mortgage Originations: Accounts

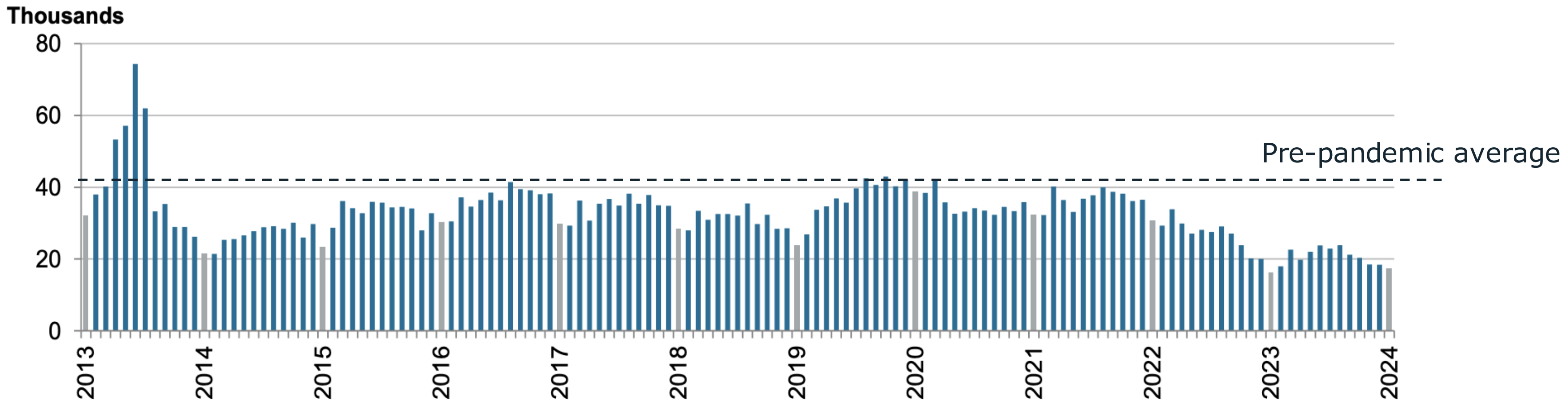
Number of Accounts in Millions; NSA



Subprime FM Originations: Accounts

Number of Accounts in Thousands; NSA

Subprime accounts defined as those with borrower's origination VantageScore® 3.0 less than 620



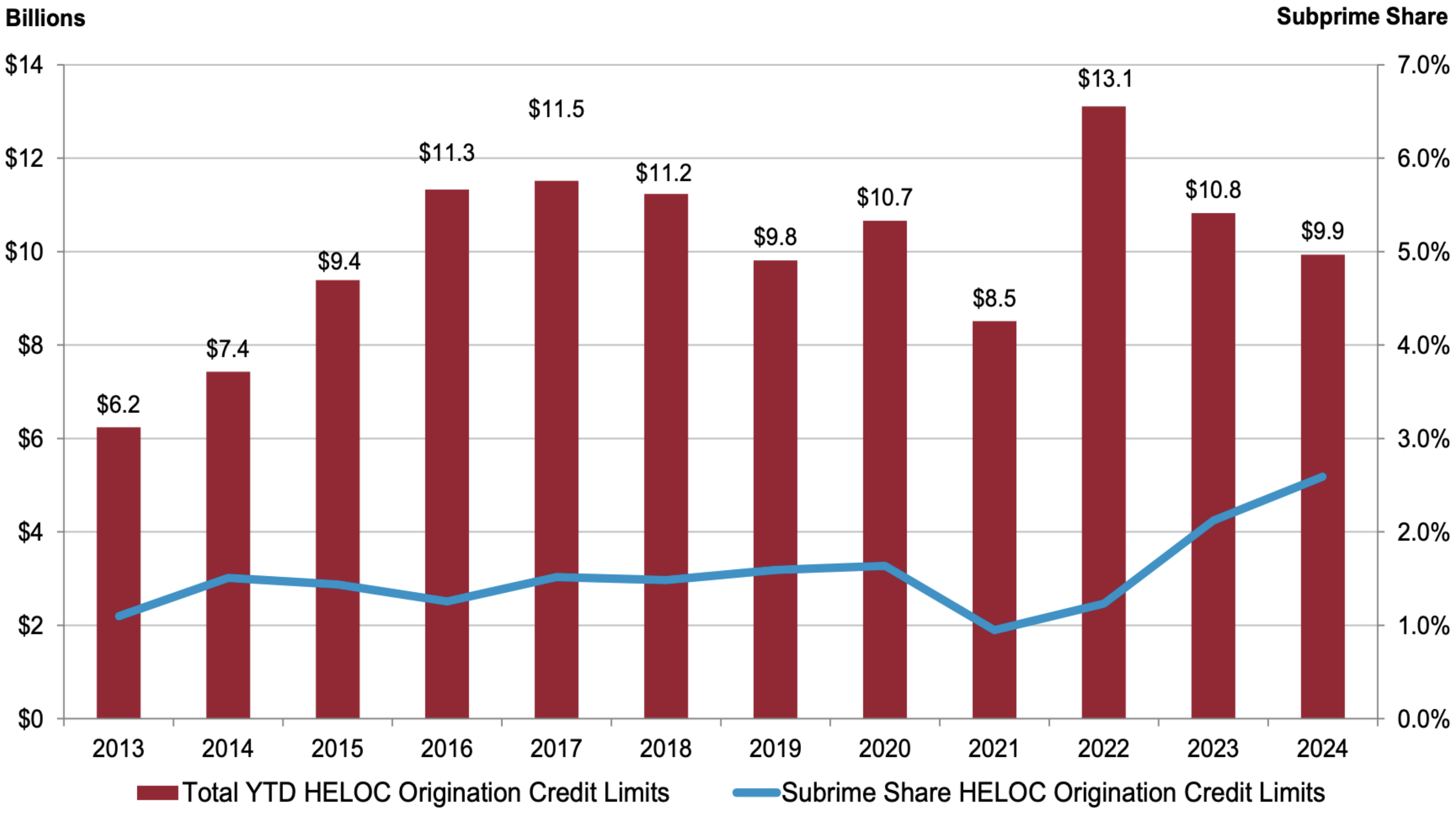
Source: Equifax Inc. Originations through December 2023 reported as of February 29, 2024.

Consumers continue to leverage high home equity values as HELOC originations reach pre-pandemic averages

The subprime share of origination CL continues to rise, although making up only 2.5%

YTD HELOC Origination Credit Limits

Year-to-Date Total Credit Limits in $Billions; Subprime Share of Total Origination Credit Limits (%); NSA
Subprime accounts defined as those with borrower's origination VantageScore® 3.0 less than 620



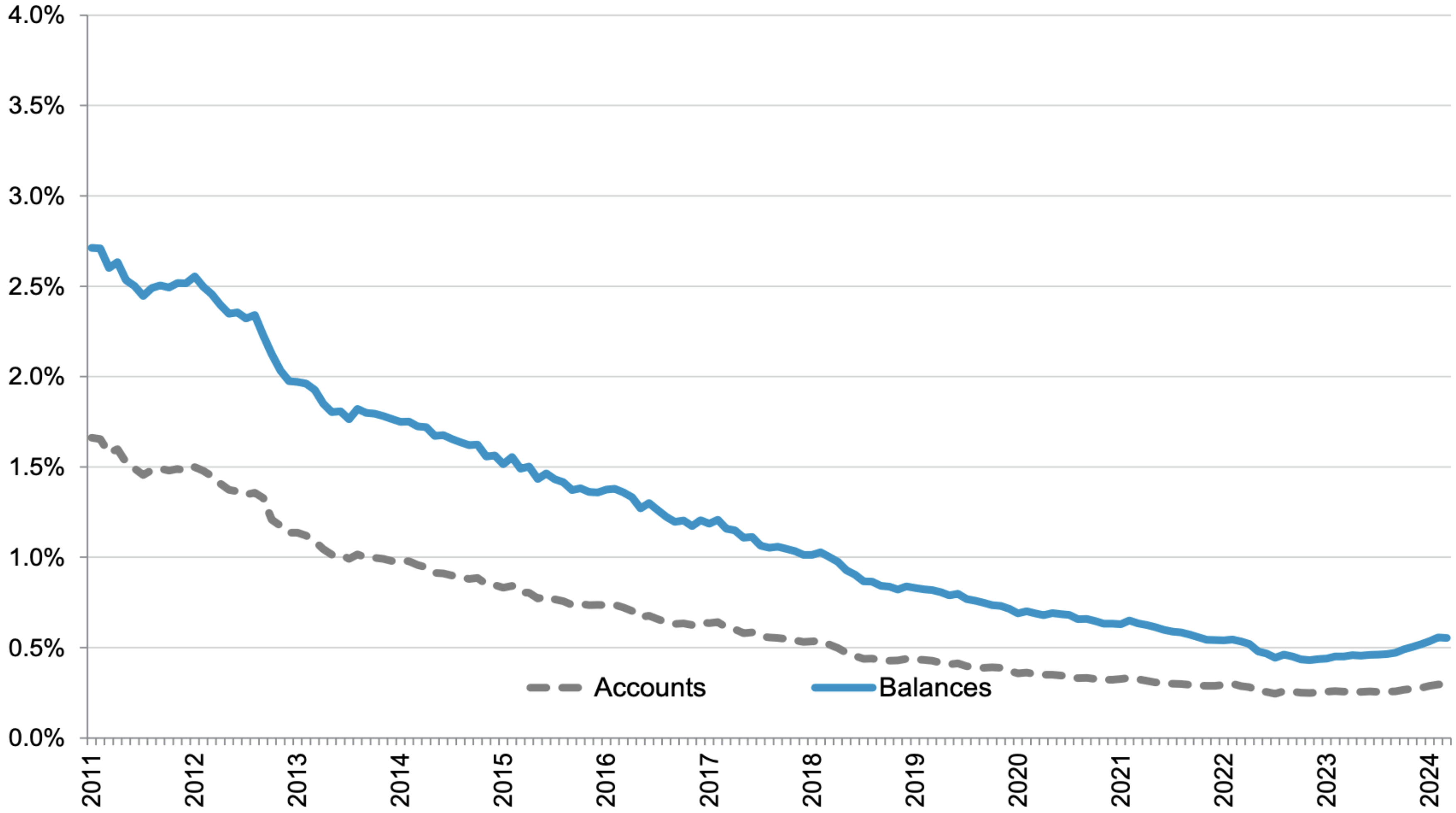
Source: Equifax Inc.

Originations through January 2024 reported as of March 2024

Although HELOC delinquencies are historically low, there is an uptick in the last couple of months

Severe Delinquency Rate

90+ Days Past Due, in Bankruptcy and In Foreclosure
Percent of Accounts and Balances; NSA; Excludes Severe Derogatory



Source: Equifax Inc.

Data as of March 2024

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

What are Credit Builder Trades and why are lenders concerned about them?

Issuer Sets aside Loan Amount of $1000 in a secure account (e.g. $1000)

Customer pays Issuer the $1000 plus $300 in interest/Fees over the loan term

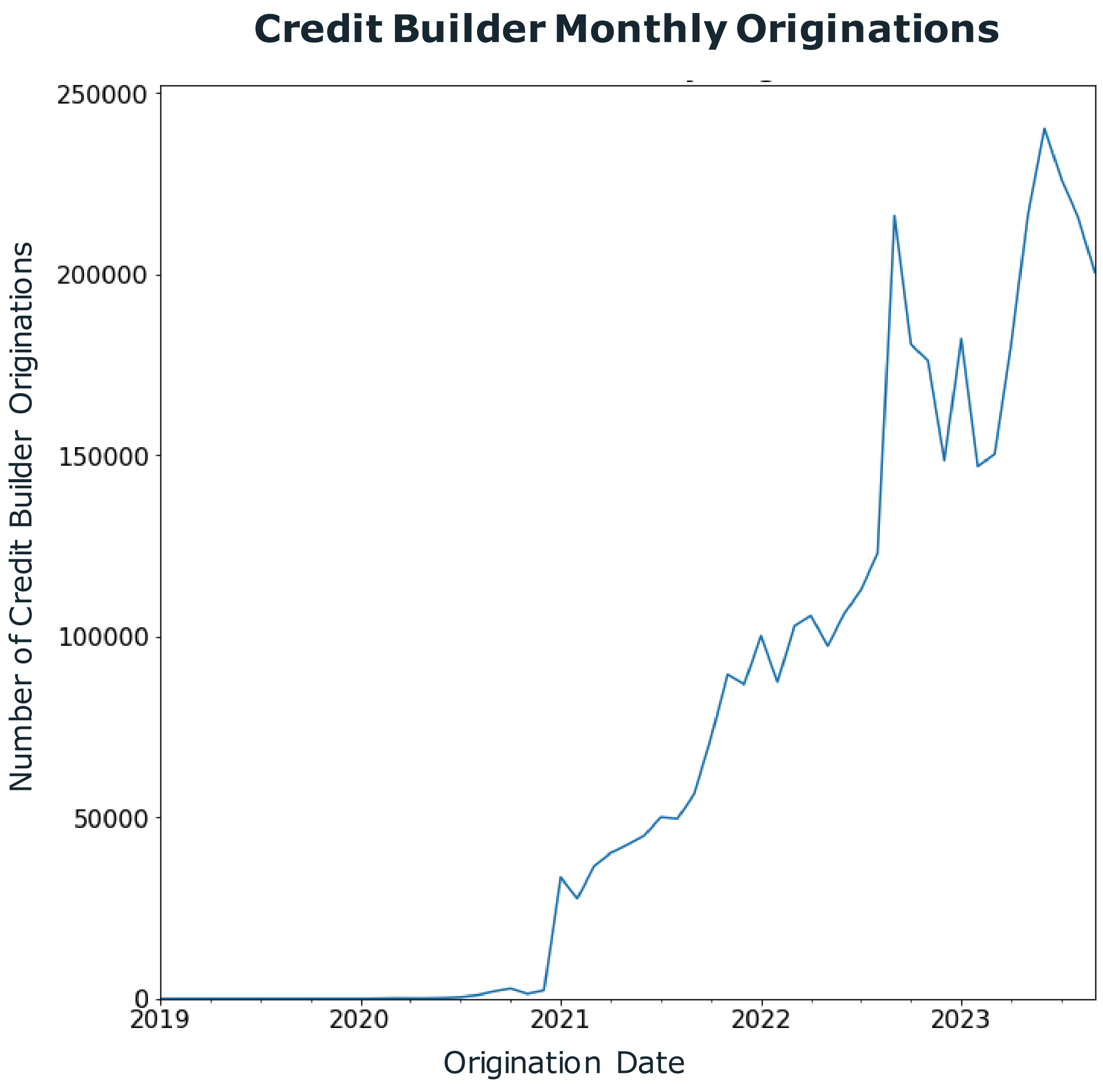
The lender returns the $1000 to the customer and keeps the $300 of interest/Fees

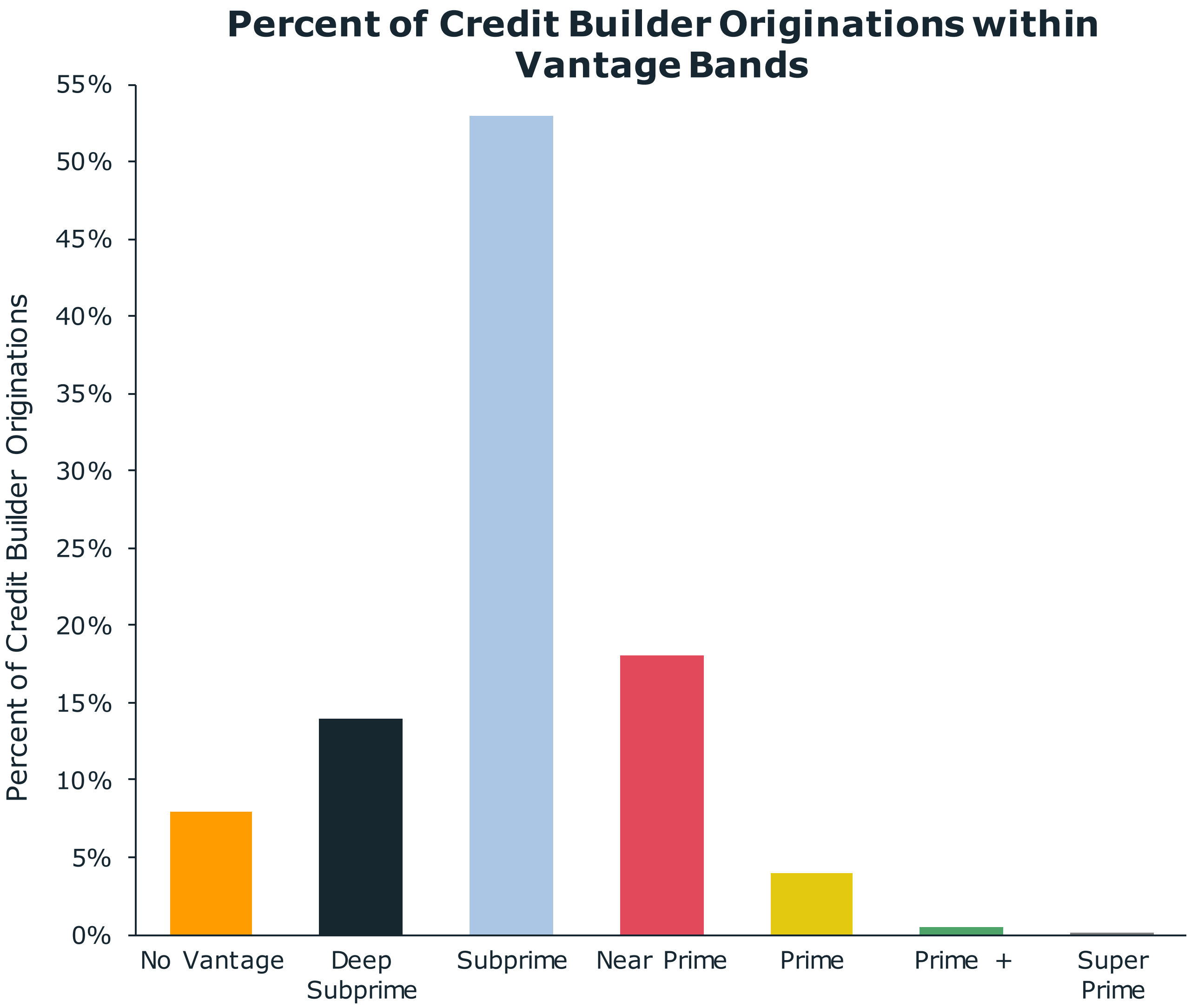
Why are lenders concerned?

- CB Trades are advertised to improve credit risk scores and lenders are concerned that this may lead to gaming/spoofing of risk scores and distort the actual risk profile of the consumer.
- CB Trades are reported selectively to the bureau, like Utilization and Credit limit are not reported*, potentially distorting bureau data and inflating risk scores.
- CB Originations have increased significantly in recent years (~40% YoY growth in 2023), making it important to understand their impacts.
- Lenders are starting to see presence of Credit Builder products as a sign of risk. We want to dive deeper into this.

* https://help.chime.com/hc/en-us/articles/4412819876119-How-does-credit-reporting-with-Credit-Builder-work

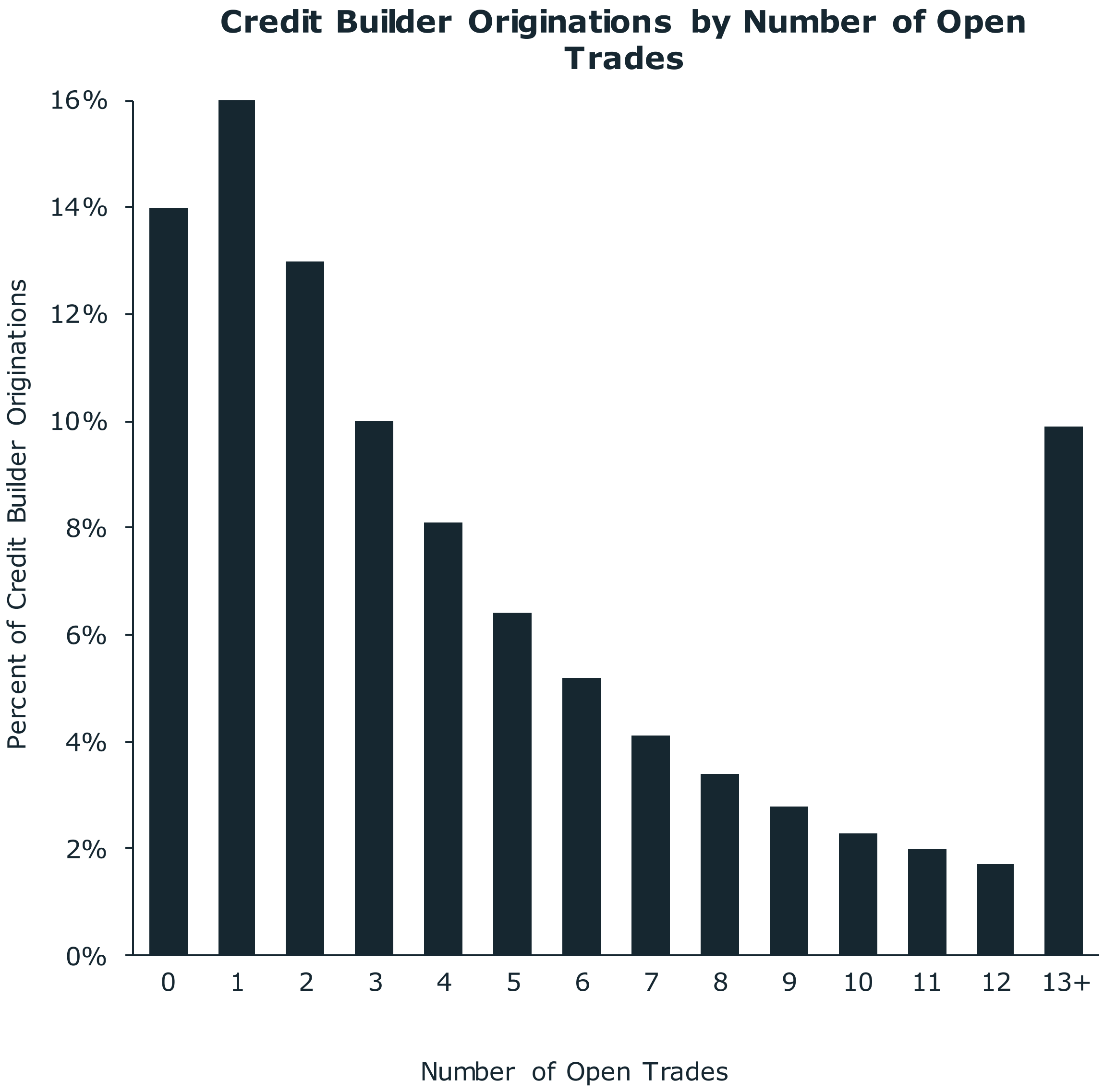
2023 Credit Builder Originations saw 40% growth over 2022 and they lean more towards subprime customers

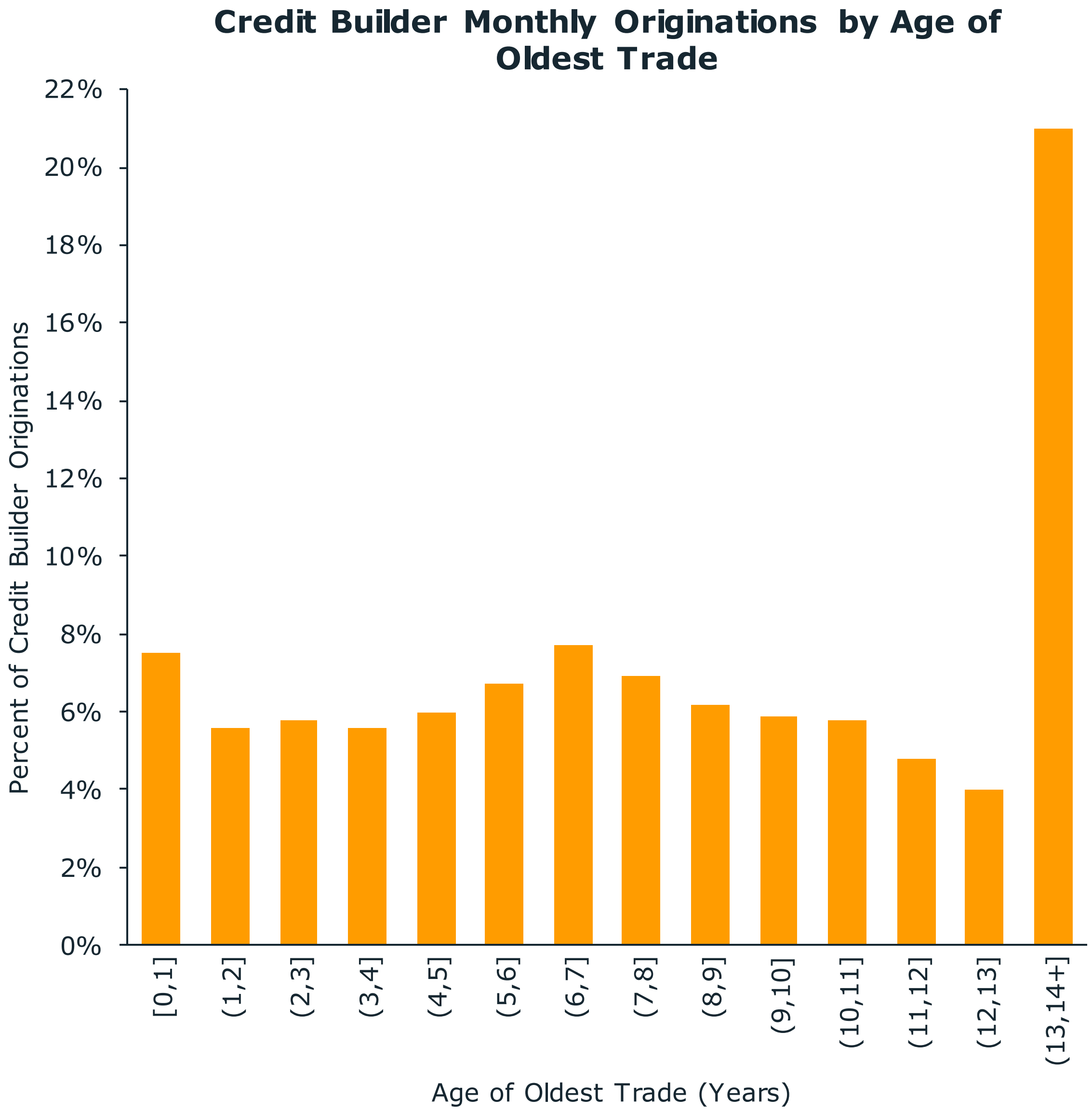




- Vantage Groups: Deep Subprime [300-500], Subprime (500-600], Near Prime (600 – 660], Prime (660 – 720], Prime + (720 – 780], Super Prime (780 – 850].
- Data for % of Credit Builder Originations is 1/2022 to 12/2022 for more recent coverage, since identification of CB Trades is often after Origination. Source: 2OS, Equifax Ignite (Reporting and Coverage may vary based on data provider).

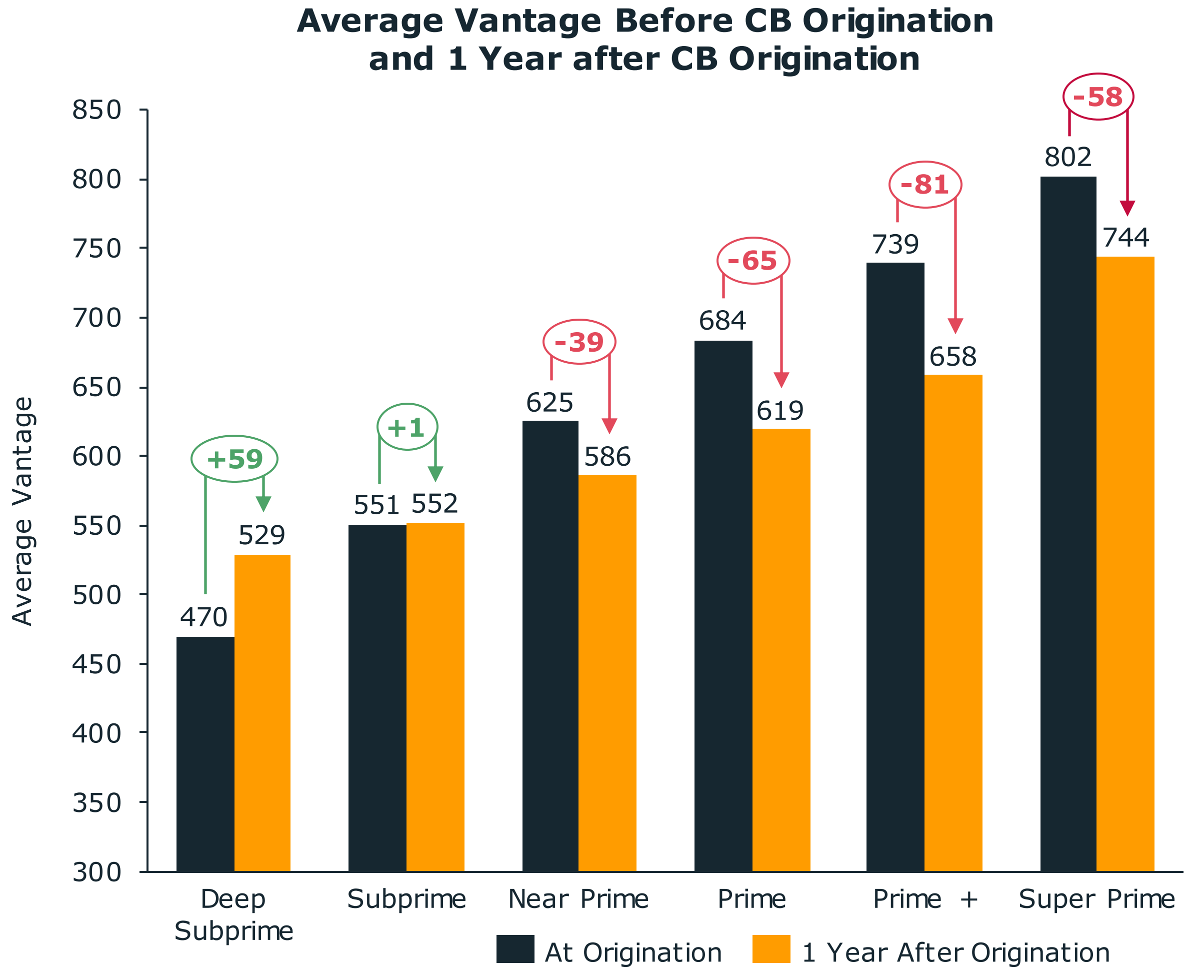
Over 40% of CB customers have 2 or fewer trade lines

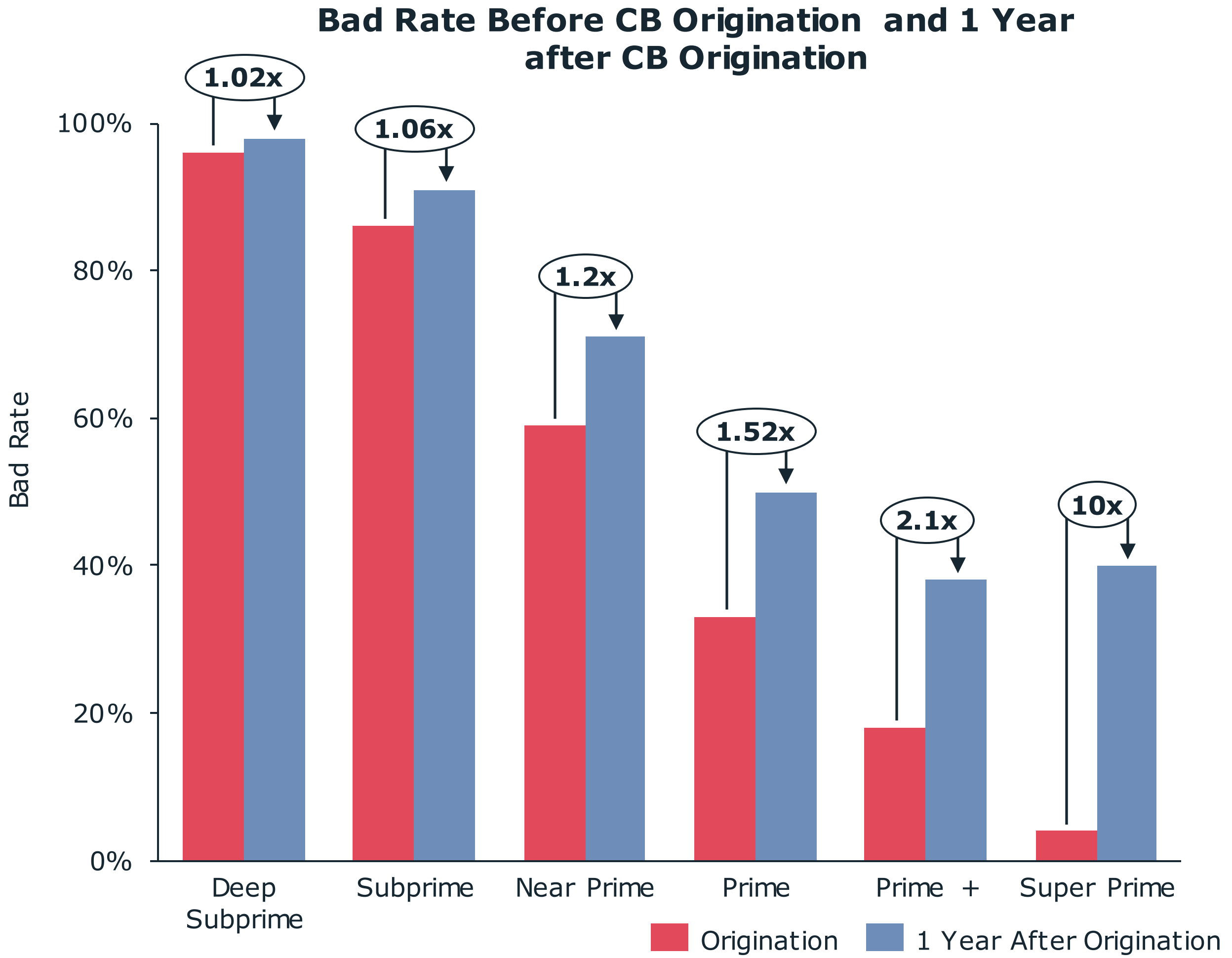




Data used is from 1/2019 to 9/2023. Source: 2OS, Equifax Ignite.

It's not clear CB trades really cause an increase in credit scores, but those in Prime+ perform much worse after opening the CB trade

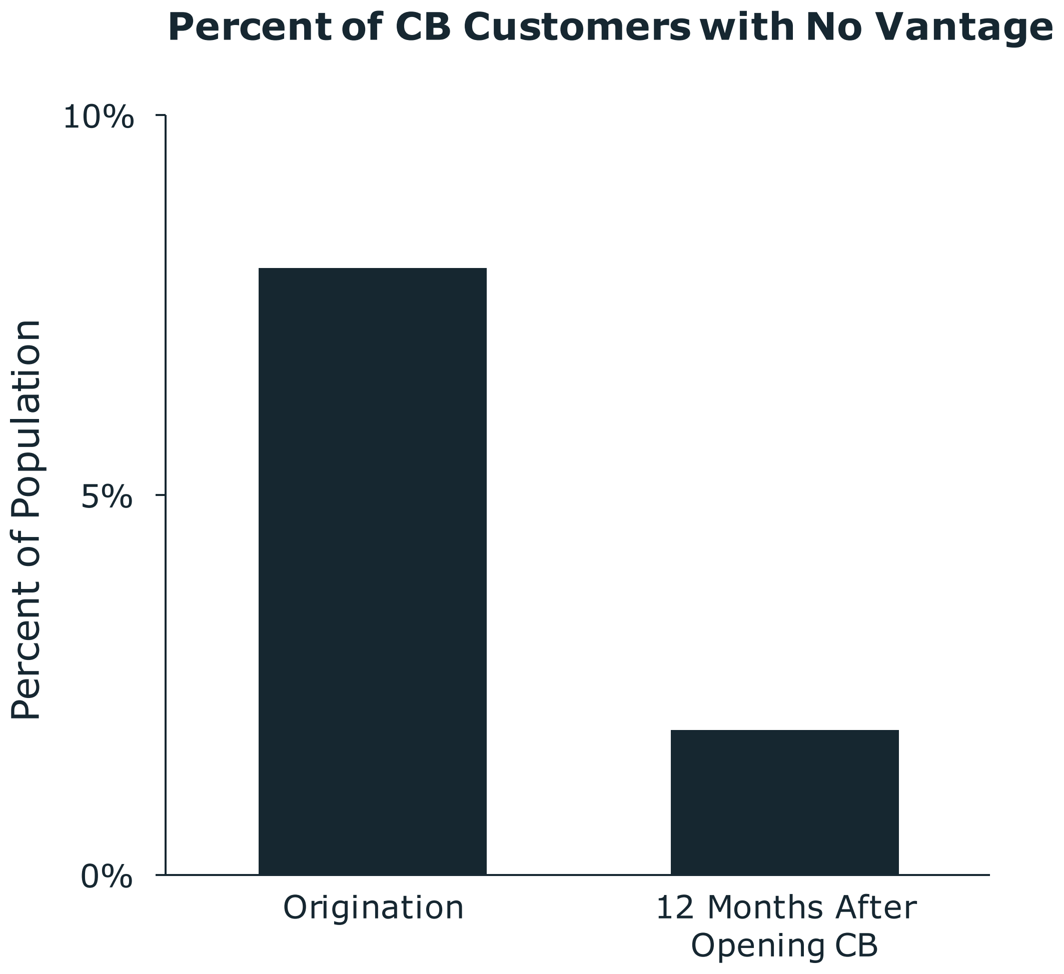


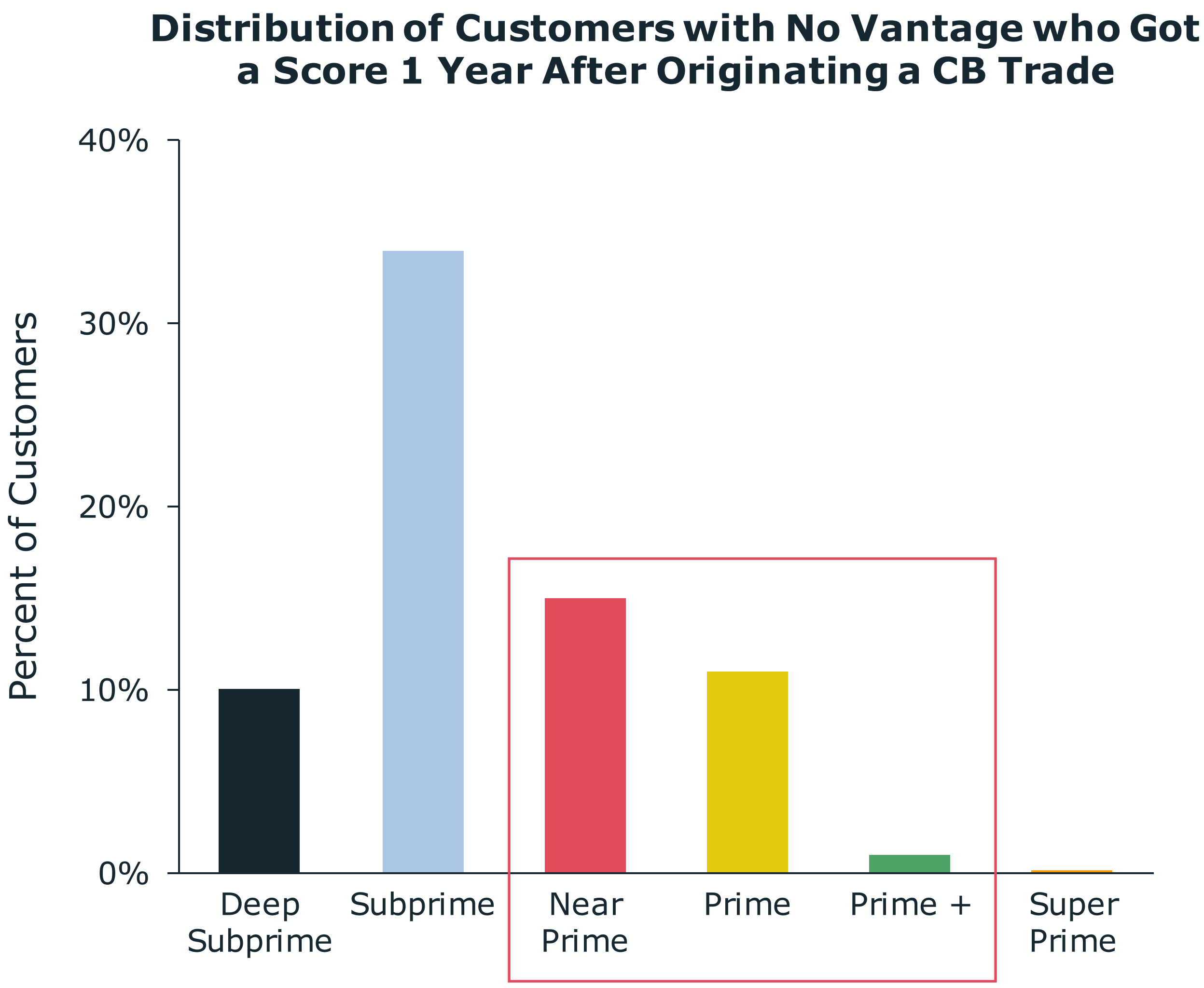


Selection Bias is likely prevalent in the more Prime Customers who are getting Credit Builder Products despite having a better Vantage Score and this can be a sign of risk.

Data on 2022 Originations. Delinquencies are defined as being 60+ Days DQ on any trades within the last 12 months (Charge Offs are included). Source: 2OS, Equifax Ignite.

After opening a CB trade, over 25% of customers with no previous trade show up as Near Prime or better





Vantage Groups: Deep Subprime [300-500], Subprime (500-600], Near Prime (600 – 660], Prime (660 – 720], Prime + (720 – 780], Super Prime (780 – 850].
Data on 2022 CB Originations. These customers could have opened other trades within the 12 month period. Source: 2OS, Equifax Ignite.

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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 or delinquent were included in the month in which the status is first reported and are excluded from active accounts thereafter. For student loans, we only considered those non-deferred accounts. A deferred student loan refers to no payment being required, and generally pertains to students still in school up until 6 months after graduation. Non-deferred student loans relates to students that have already graduated where a payment is required.

Definition of delinquency: For bankcard, auto loans and personal loans, we considered accounts as delinquent if those were 60+ days past due. Specifically, we included those accounts in 60-90 DPD, 90-120 DPD and 120+ DPD buckets; we excluded charged off and bankrupt accounts. For student loans, we considered accounts as delinquent if those were 90+ days past due. We included those accounts in 90-120 DPD, 120+ DPD and bankruptcy buckets; we excluded charged off accounts.

Definition of Personal Loans: We define personal loans as those accounts labeled as personal finance and installment loan.

Vantage bucket timing: To better observe movements within Vantage buckets (and reduce the effect of re-classification of accounts across buckets), we lagged the date when the vantage bucket is observed by 3 months from the current archive date when looking at performance charts.

Origination timing: Originations are lagged by 2 months from the current archive date. Hence, the most recent origination datapoint is from December 31, 2023.