2022 Q2 Credit Risk Review

Trends and Early Risk Indicators in Consumer Credit

Syed Raza PhD, Chase Nielsen, Scott Barton

August 8th, 2022

Executive Summary - Overall State of Credit – August 2022

Unsecured Lending (Credit Card & Personal Loans)

- The CC balances continue to increase in 2022 Q2 with the largest increase in YOY balances (13%) in 20+ years
- A record 233M new credit accounts were opened (highest since 2008) as consumers increase borrowing to deal with inflation. We see a drop in proportion of subprime customers as lender tighten their underwriting
- After the increased PL originations in 2021-2022Q1, we are seeing a drop in origination volumes (scaling back to pre-pandemic levels) and tightening of underwriting standards
  - We see an increase in average origination FICO and Income, and a drop in proportion of subprime customers
- Delinquencies are creeping up but still below pre-pandemic levels
- We are seeing increased risk (higher than pre-pandemic) in vintages from Q3-Q4 2021. The question remains if this is an overall increase in risk or more due to the higher subprime concentration and loosened underwriting
  - An argument can be made that lenders who tightened their underwriting in 2022 would not expect as much increase in risk for later vintages
  - We see at least some evidence that the increase in risk is isolated towards more subprime for now

Auto

- Although the charge-offs are increasing, the severity continues to decrease. This is because of higher recoveries due to inflation of underlying assets. This trend is expected to face headwinds as used vehicles start to decrease in value
- This increased value of underlying assets is creating another incentive for consumers to make payments. For subprime auto, we are seeing attributes like LTV (loan-to-value) ratio becoming even stronger differentiators of risk

Executive Summary Continued

Impacts of Inflation on Lending

- Inflation is disproportionately impacting lower income consumers as their effective income has reduced. We see a much steeper increase in risk for customers with income < $50k
- High inflation is forcing consumers to dip into their savings. The saving rate fell to 5.1% in June – lowest since 2009
- Shift to lower Origination DTI suggests lenders are targeting customers that have lower debt ratio and will be more resilient to impacts of inflation

Risk Score Warping

- We continue to see warping of risk scores due to suppression of various risk signals. Some contributors being:
    - Student Loan Deferrals
    - Buy-Now-Pay-Later (BNPL) trades
    - Credit builder trades
    - COVID data degradation

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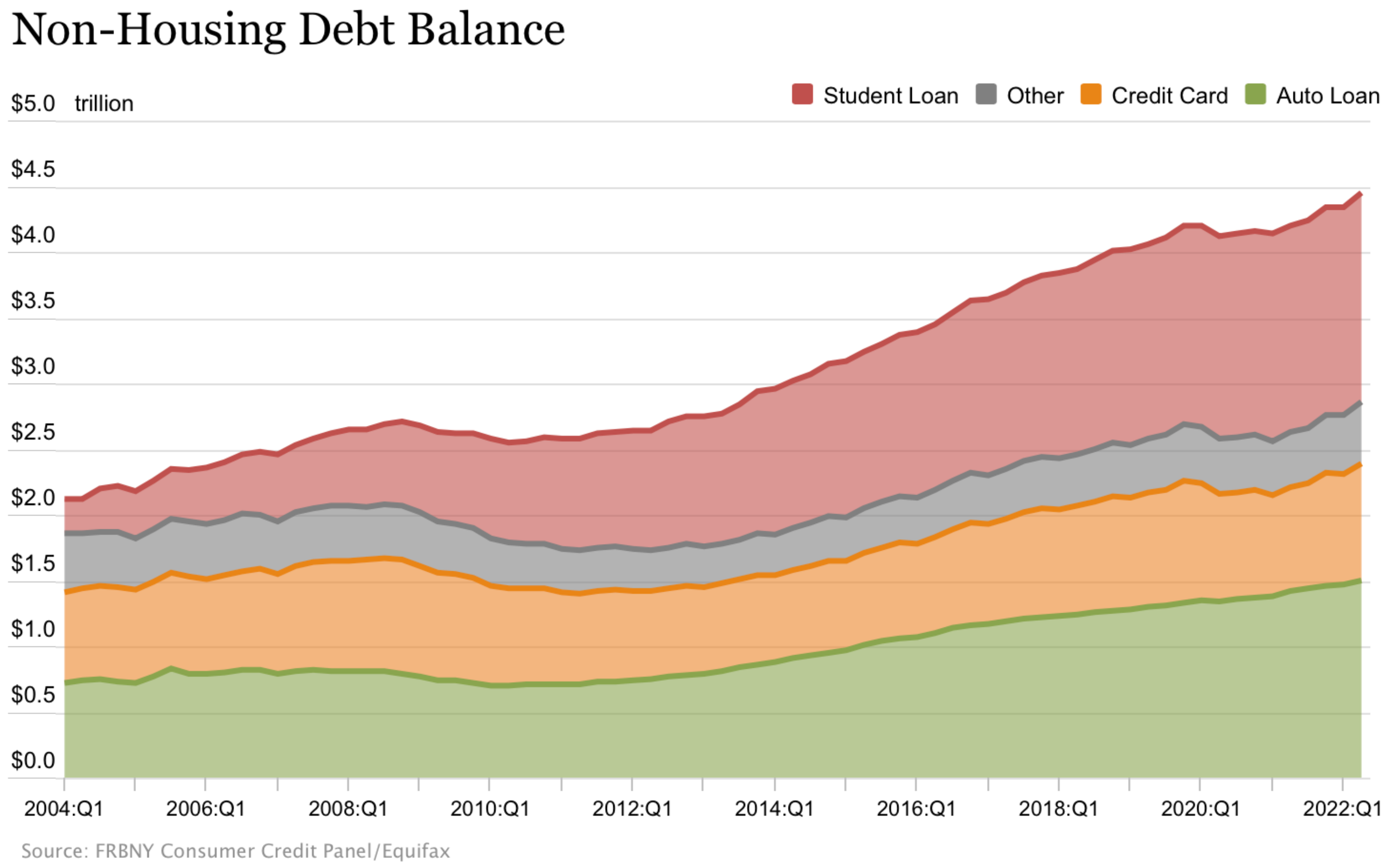
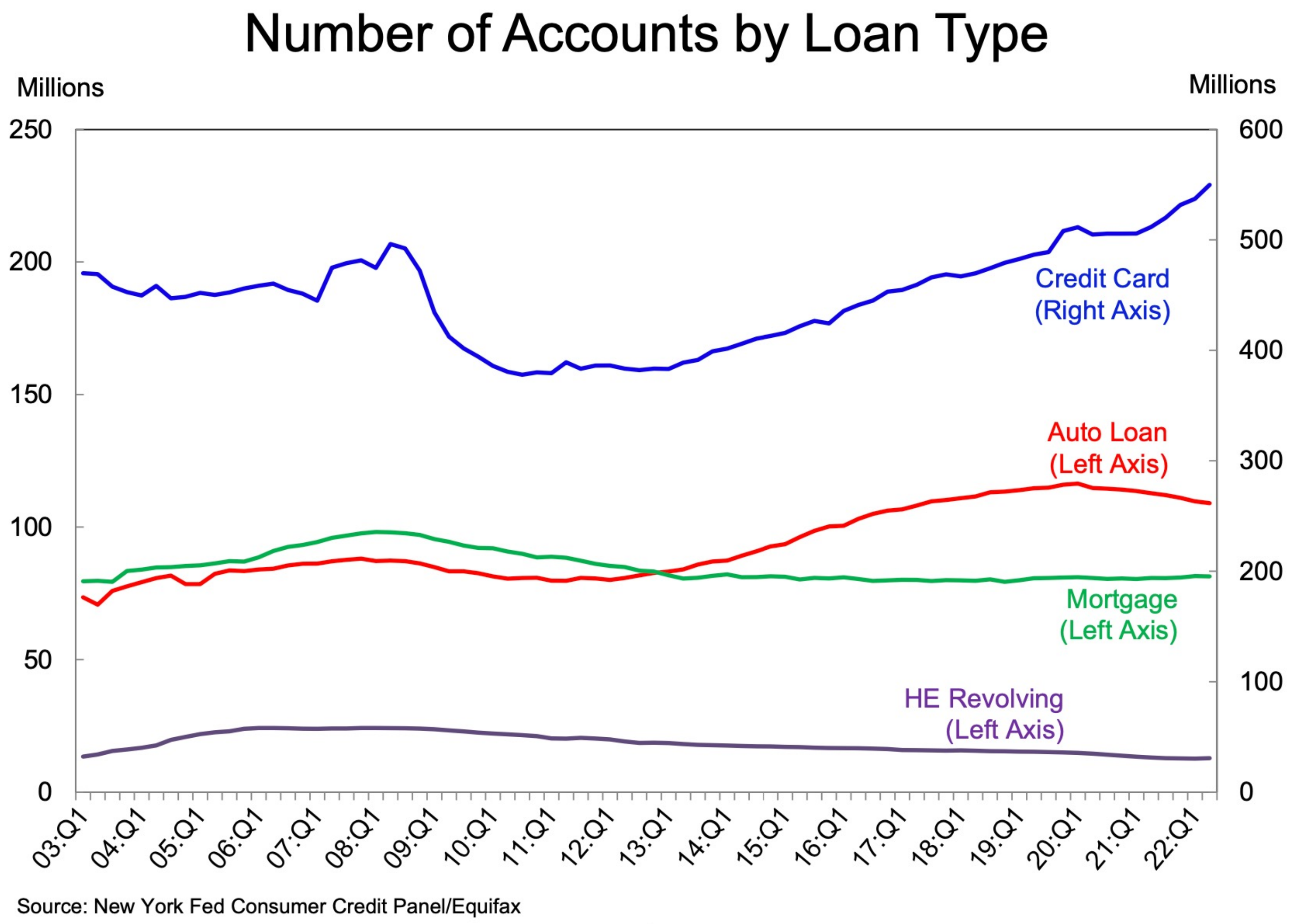
Credit Card balances in Q2 increased 13% YOY – highest in 20+ years. Despite the increase, CC balances remain slightly below pre-pandemic levels



- Source: NY Fed, data as of 2022 Q2

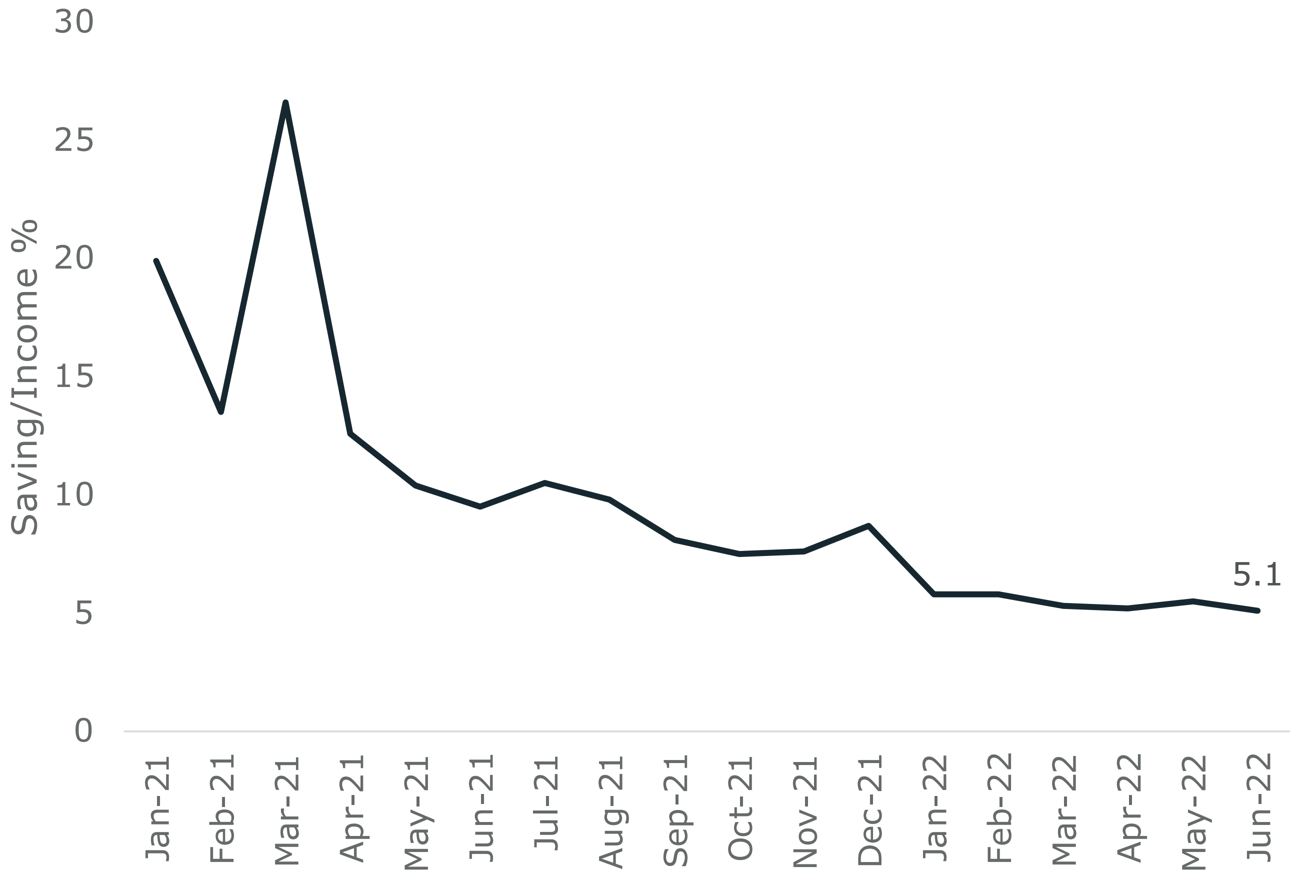
A record 233M new credit accounts were opened (highest since 2008) as consumers increase borrowing to deal with inflation.



- Source: NY Fed, data as of 2022 Q2

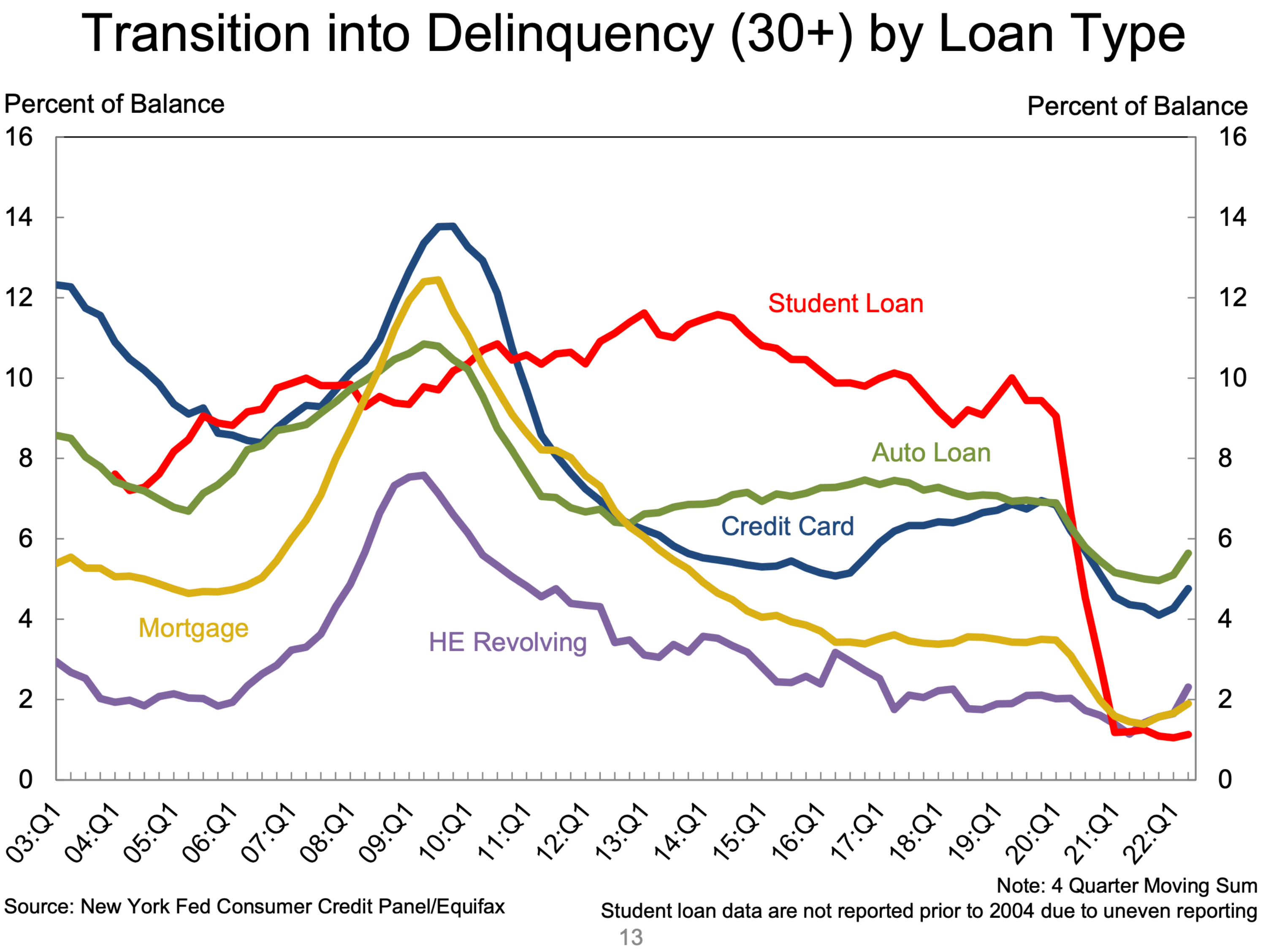
High inflation is forcing consumers to dip into their savings. The saving rate fell to 5.1% in June – lowest since 2009

Personal saving as a percentage of disposable personal income



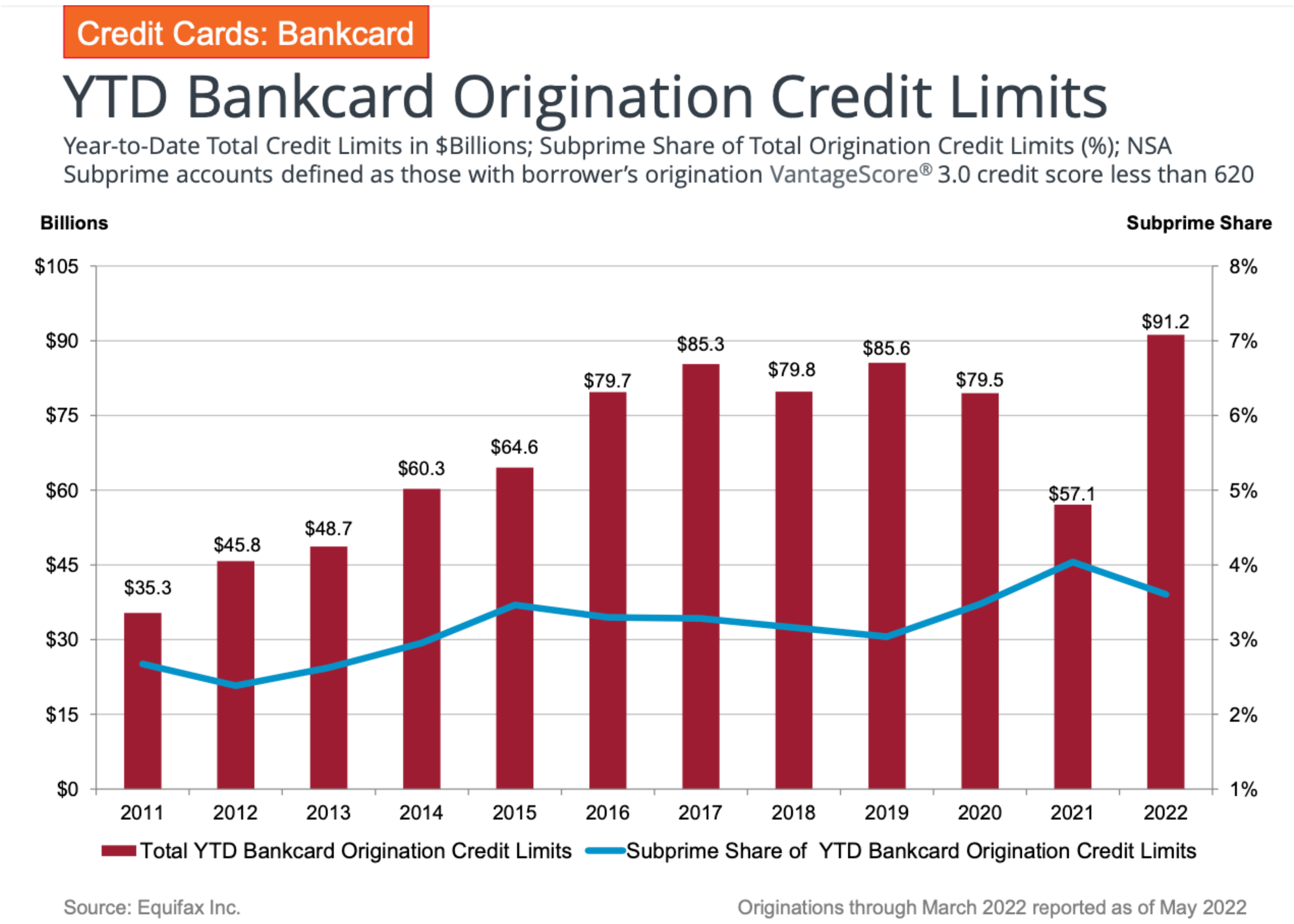
Source: BEA, data as of June 2022 https://www.bea.gov/data/income-saving/personal-saving-rate

Delinquencies are picking up but still below pre-pandemic levels. Student Loan DQ remain heavily muted due to deferral programs



- Source: NY FED 2022-Q2 data

As lenders tighten their underwriting standards, we see a drop in the subprime concentration



- Source: Equifax Consumer Credit quarterly

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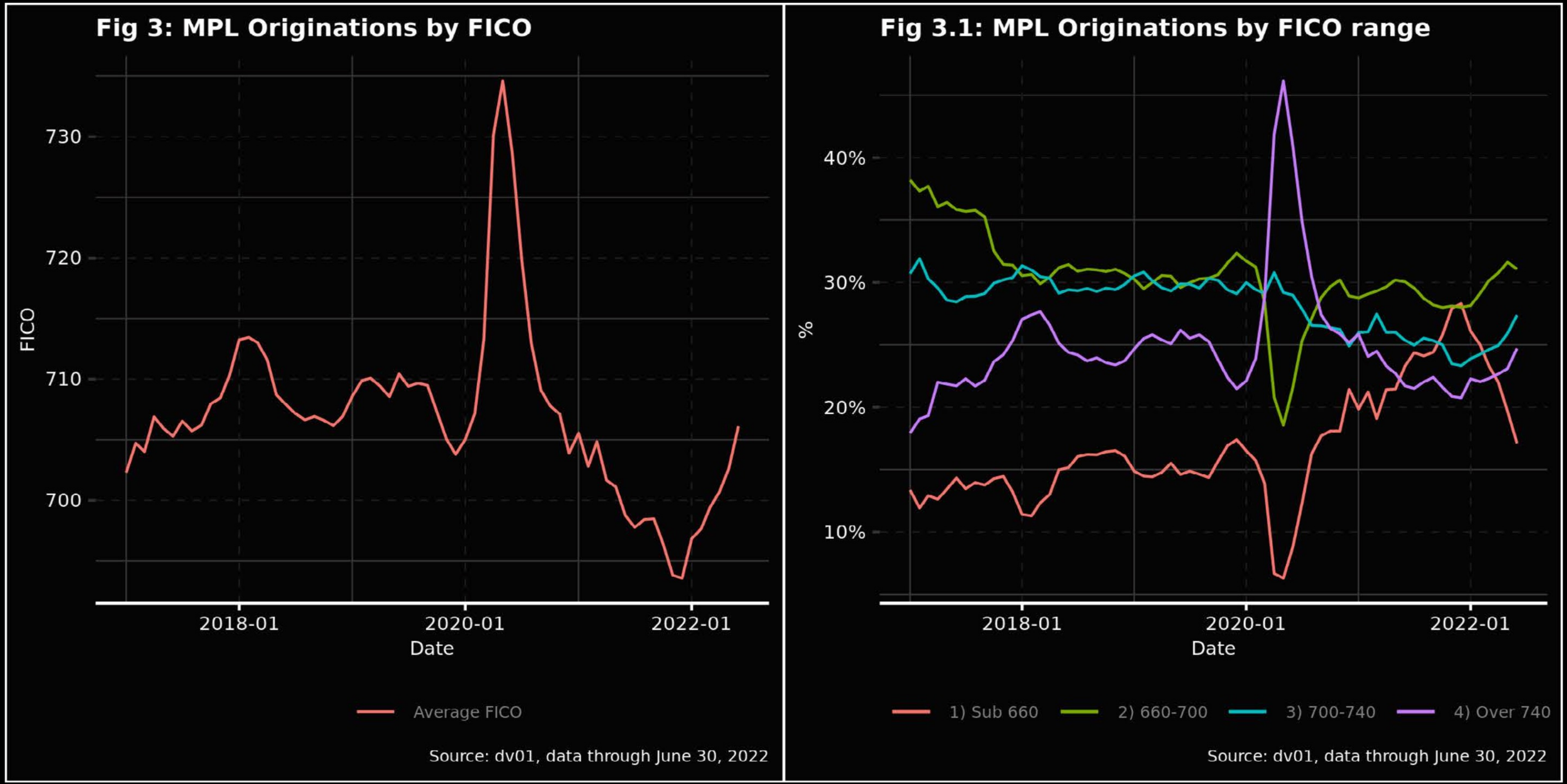
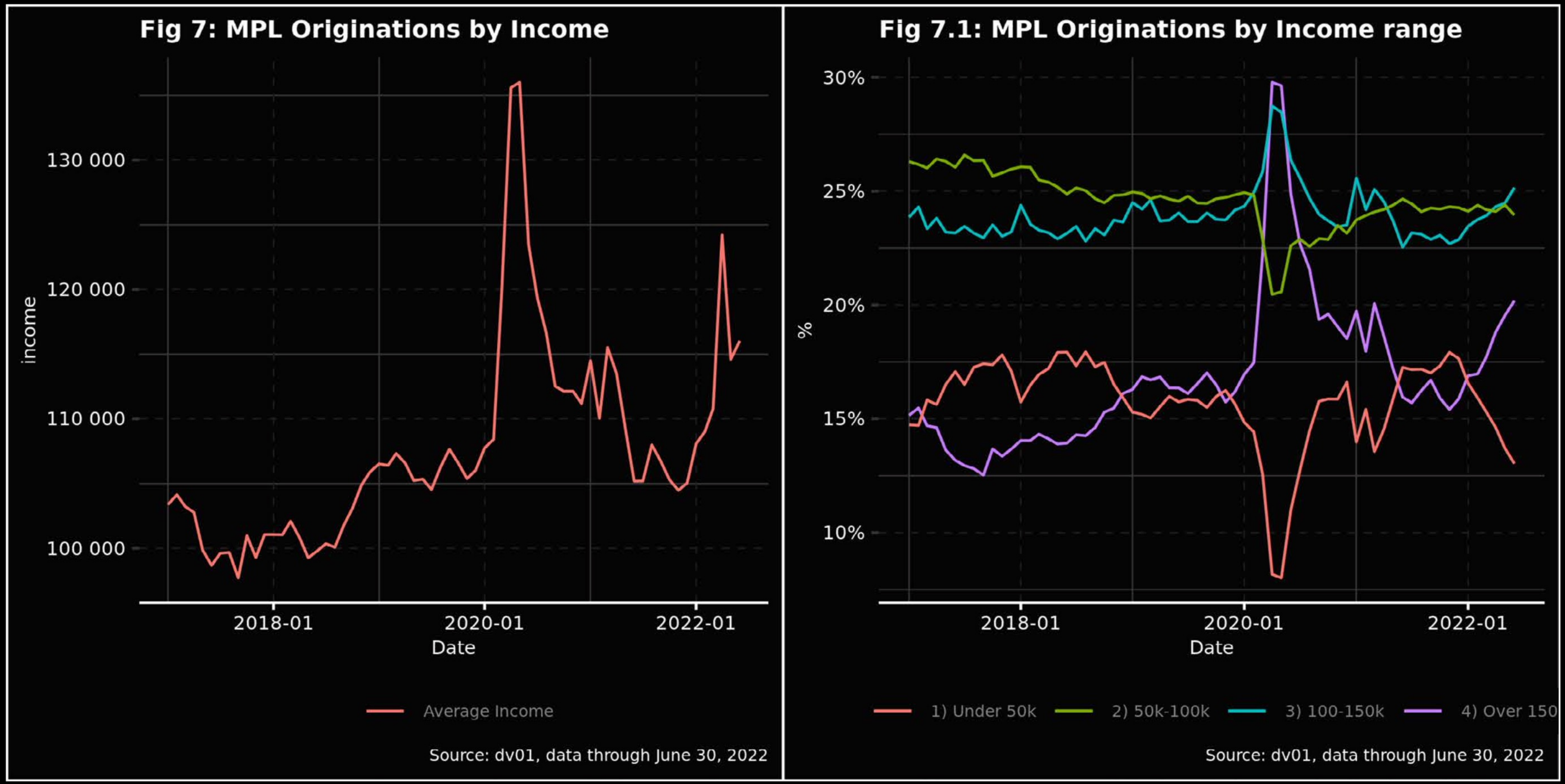
Tightening of Underwriting Standards

Avg origination FICO is increasing and there is a significant drop in sub-660 FICOs



These FICO scores are also warped by COVID impacts and suppression of various risk signals

Source: dv01, data as of June 30, 2022



The spike in April 2022 is a data quality issue

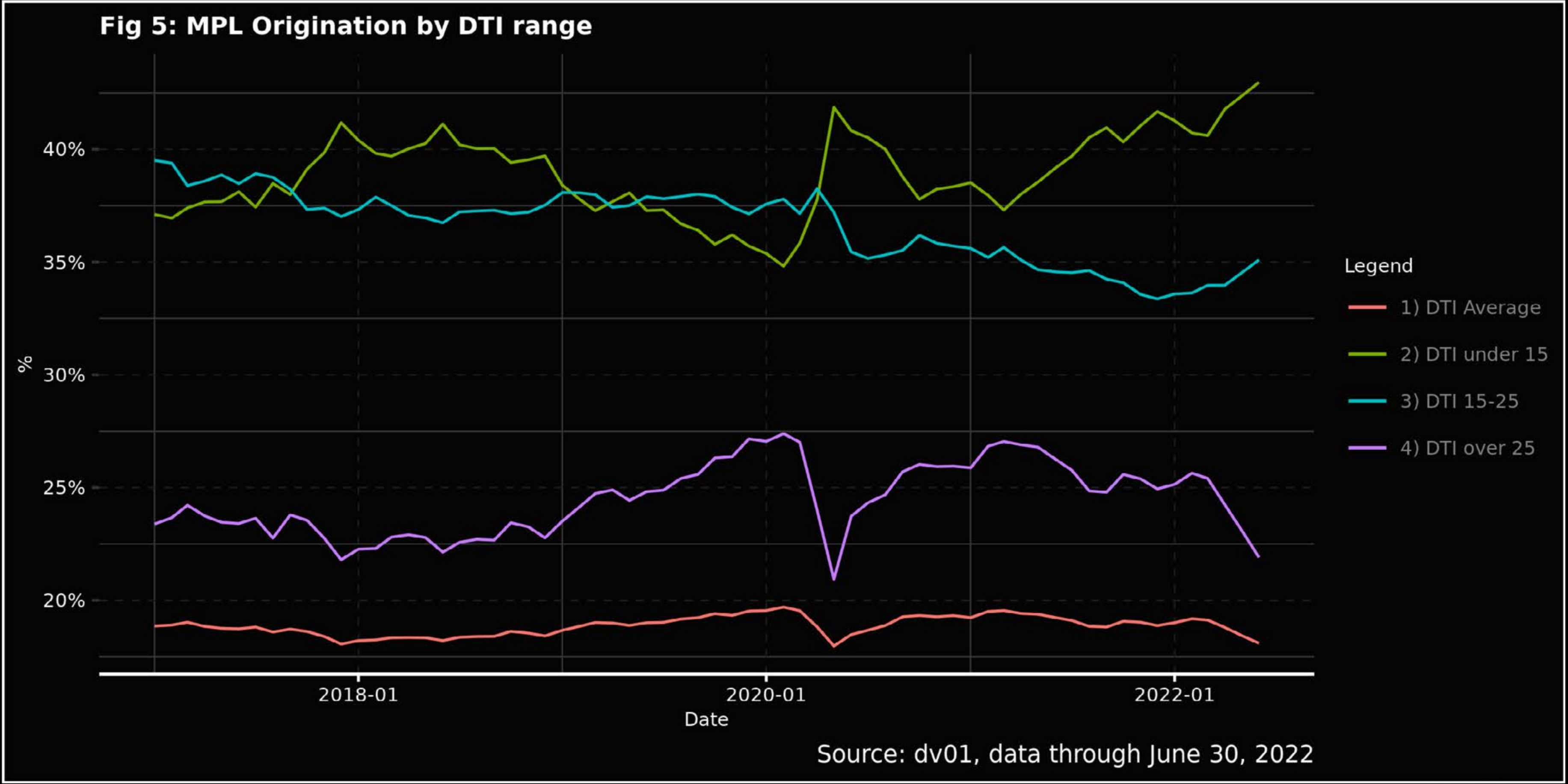
Tightening of Underwriting Standards

Avg origination Income is increasing and there is a significant drop in sub-$50k income

Source: dv01, data as of June 30, 2022

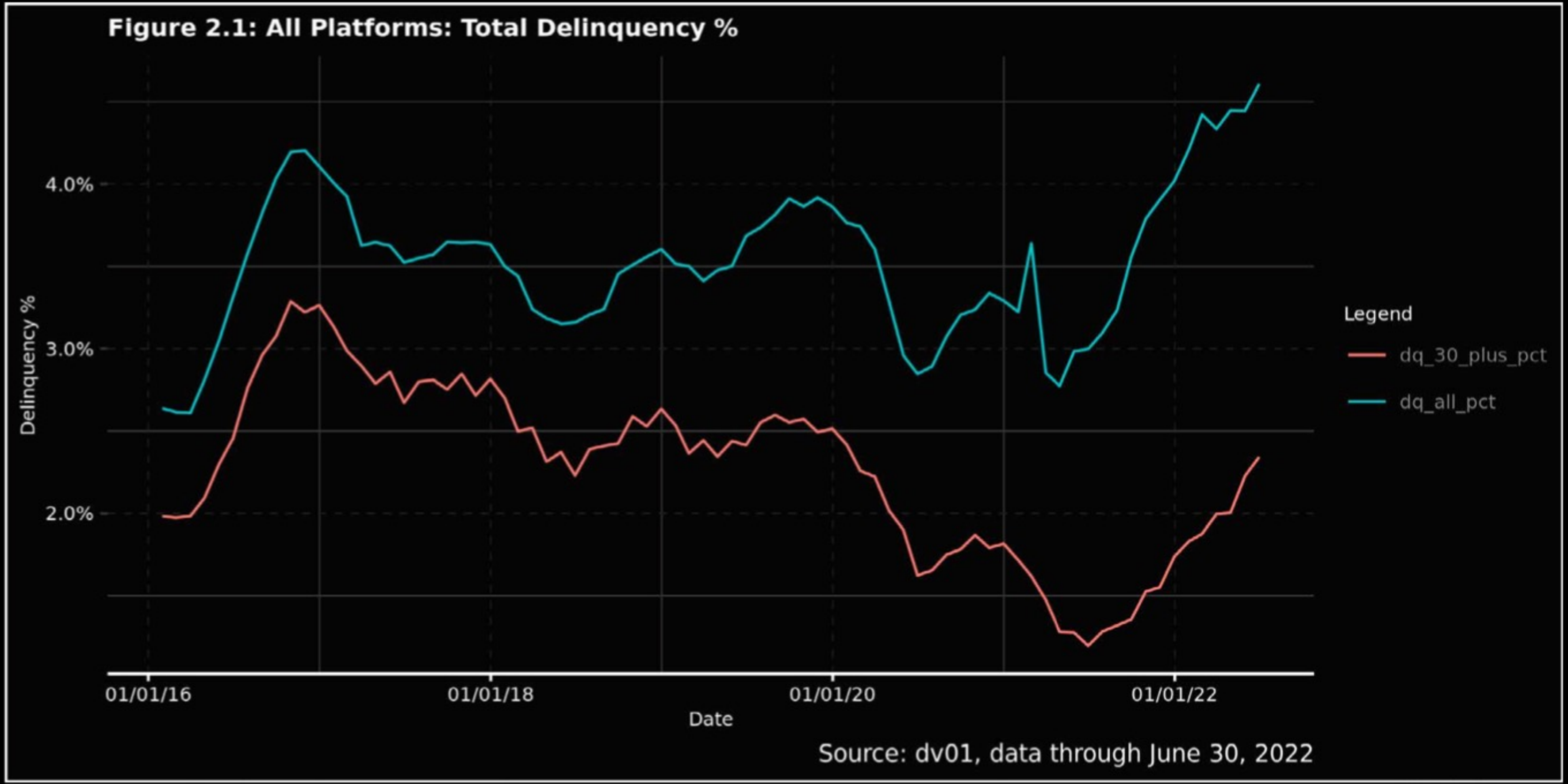
Shift to lower DTI

This suggests lenders are targeting customers that have lower debt ratio and will be more resilient to impacts of inflation



Source: dv01, data as of June 30, 2022

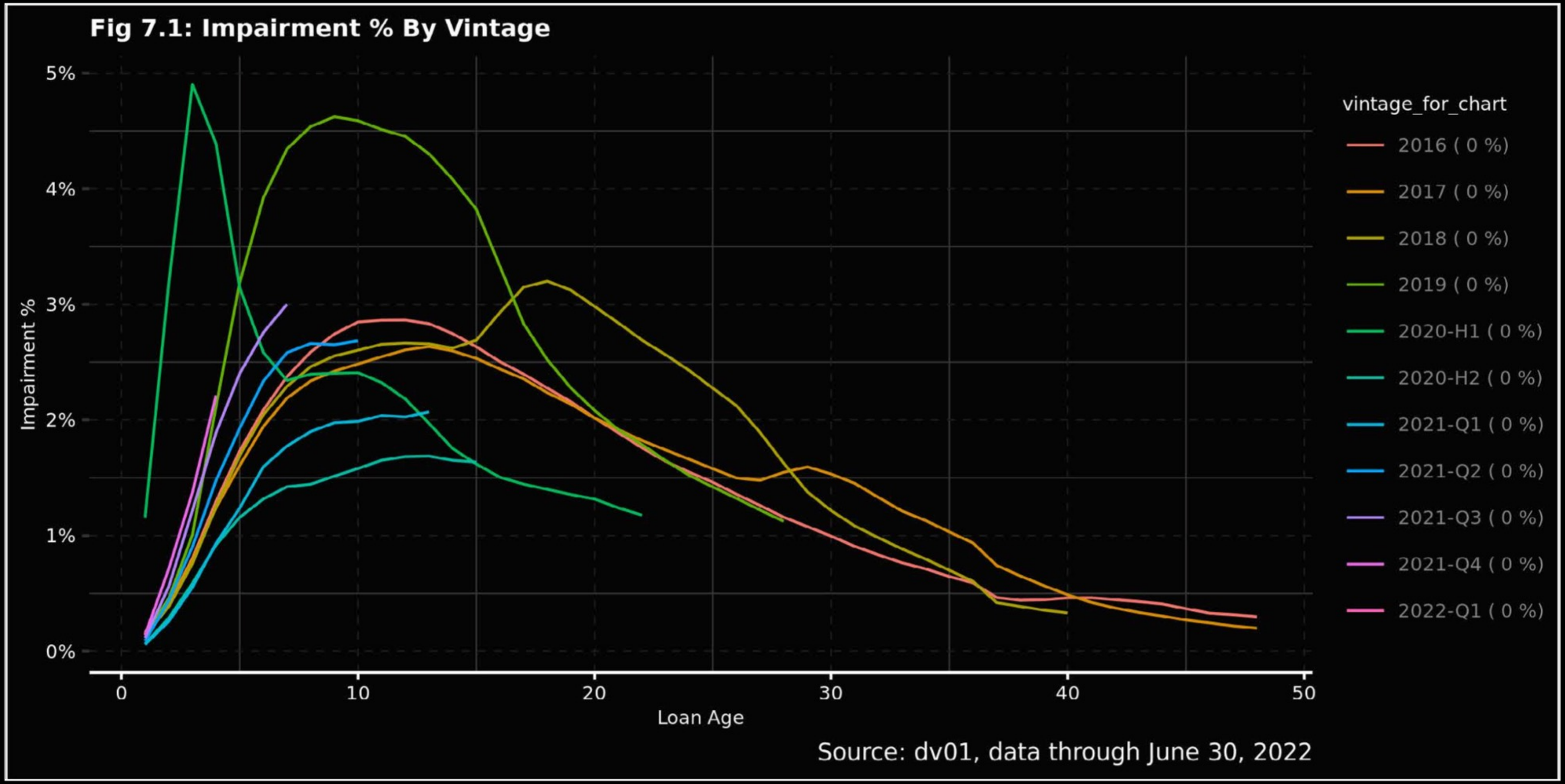
Increase in delinquencies but still below pre-pandemic levels



Source: dv01, data as of June 30, 2022

Due to the loosened underwriting with a higher proportion of subprime, we see increased risk (even higher than pre-pandemic) in vintages of Q3 & Q4 2021

Impairment = DQ + Modification

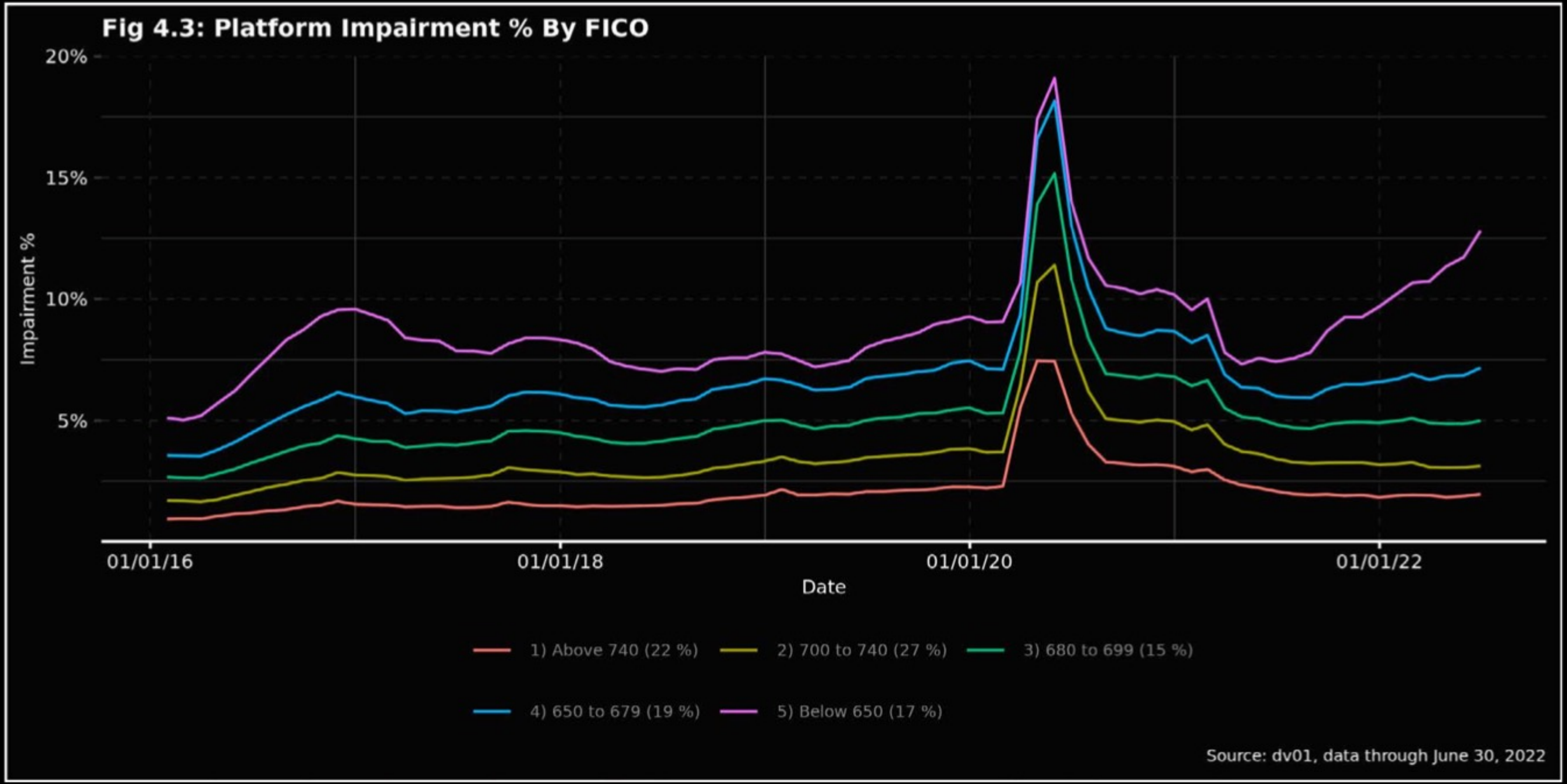


- An argument can be made that for the lenders that tightened their underwriting in 2022, we should not expect as much increase in risk.
- The question remains if there is an overall increase in risk or if it is just isolated to subprime

Source: dv01, data as of June 30, 2022

Overall performance reads provide at least some evidence that the increased risk is isolated towards more subprime for now

Impairment = DQ + Modification

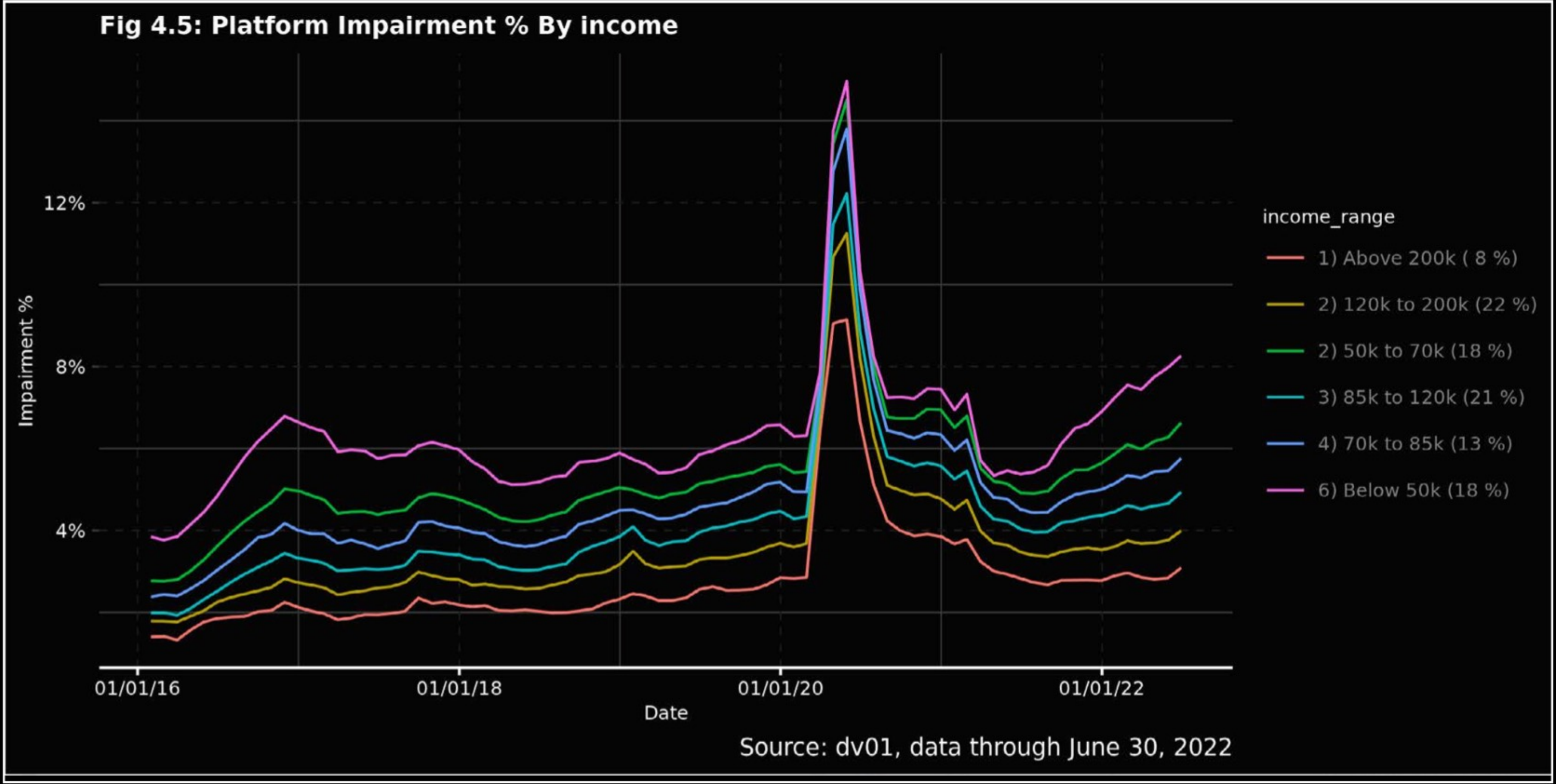


A majority of recent delinquencies are concentrated towards sub-660 FICO. Their risk appears to be higher than pre-pandemic levels

Source: dv01, data as of June 30, 2022

Inflation is disproportionately impacting the lower income. We see a much steeper increase in risk for customers with income < $50k

Impairment = DQ + Modification



There is an uptick in risk across the other income bands too

- Source: dv01, data as of June 30, 2022
- For commentary on inflation's impact on lending, refer to our whitepaper https://2os.com/wp-content/uploads/2022/05/Credit-Risk-Quarterly-Q1-2022-in-Review.pdf

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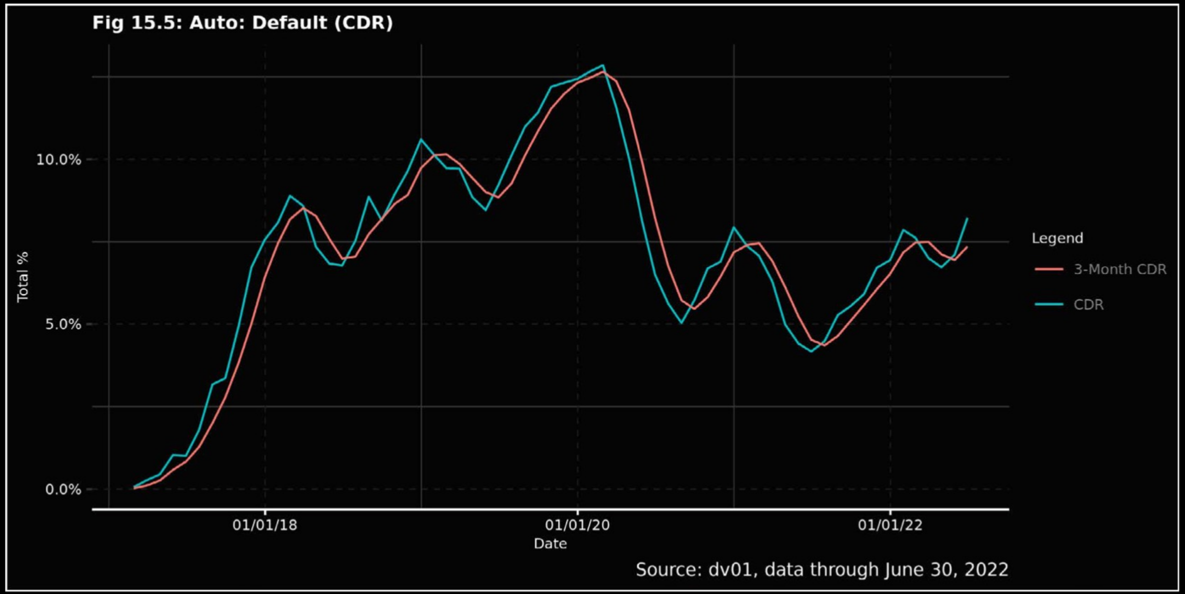
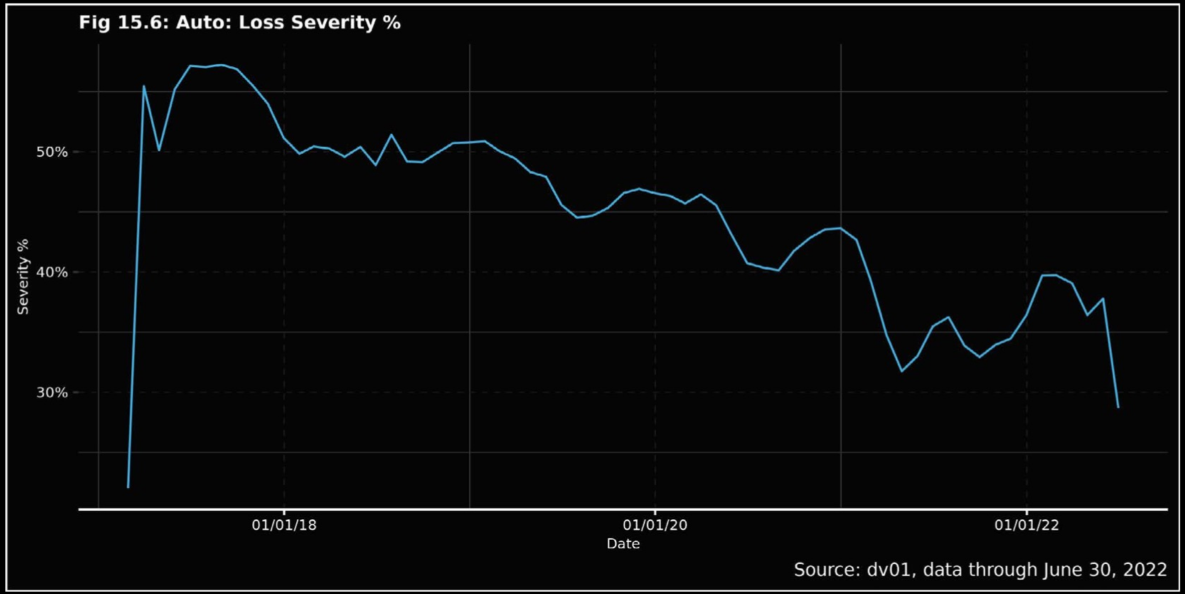
Although the charge-offs are increasing, the severity continues to decrease because of higher recoveries due to inflation of underlying assets

Chargeoffs

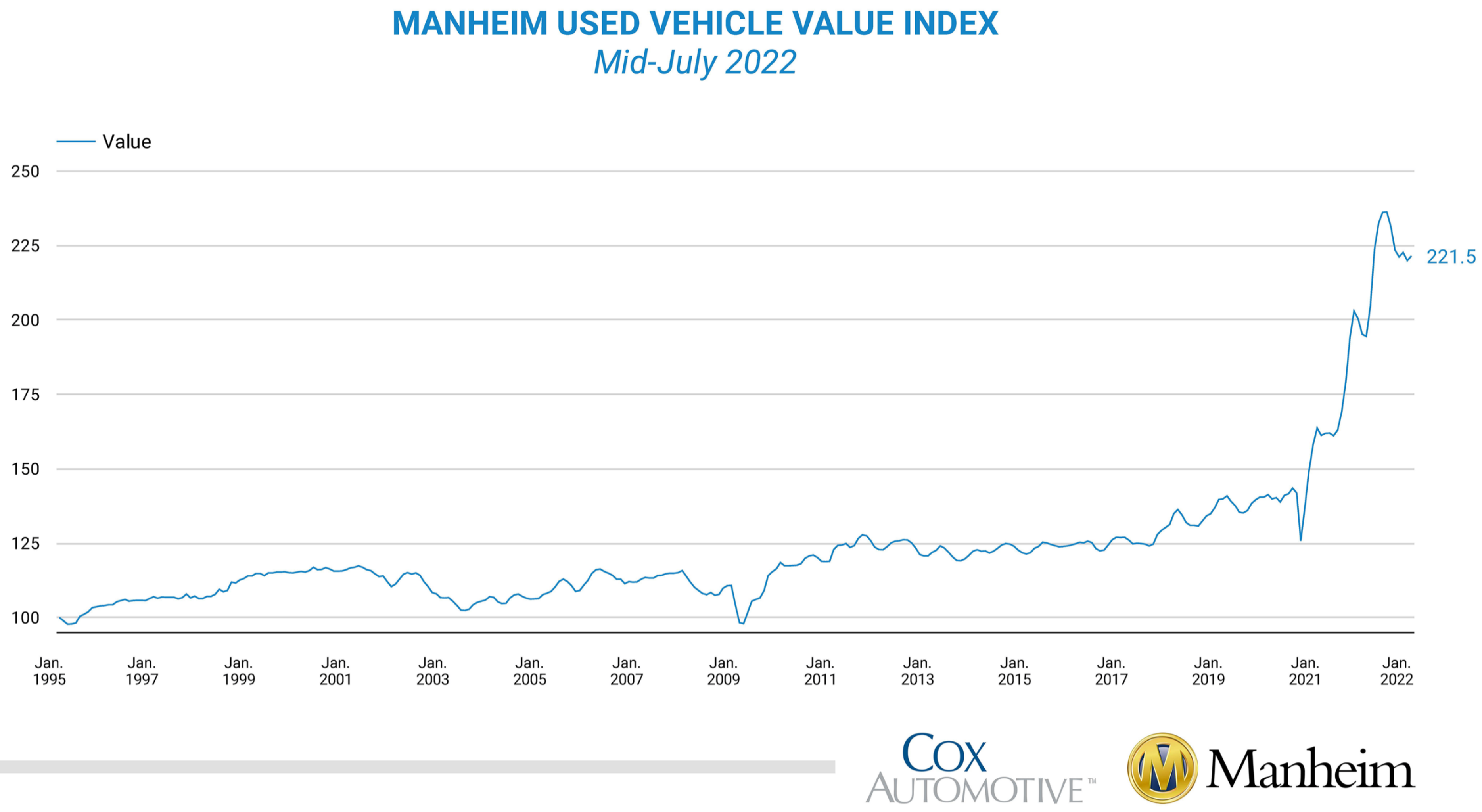


Severity



Source: dv01, data as of June 30, 2022

This lowered severity trend is expected to face headwinds as used vehicles start to decrease in value



Data as of Mid-July 2022

Impairment = DQ + Modification

Attributes like LTV can be stronger differentiators of risk as consumers have another incentive to make payments with the value of the asset increasing

FICO

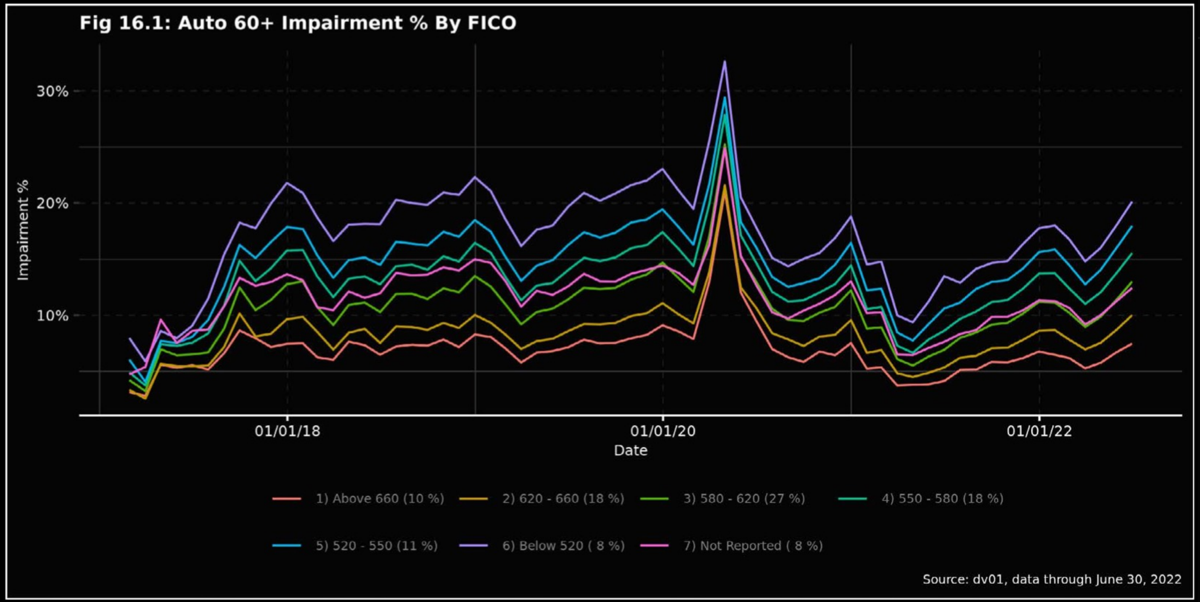


Fig 16.1: Auto 60+ Impairment % By FICO

LTV

More pronounced fanning after COVID as vehicle values increased in value

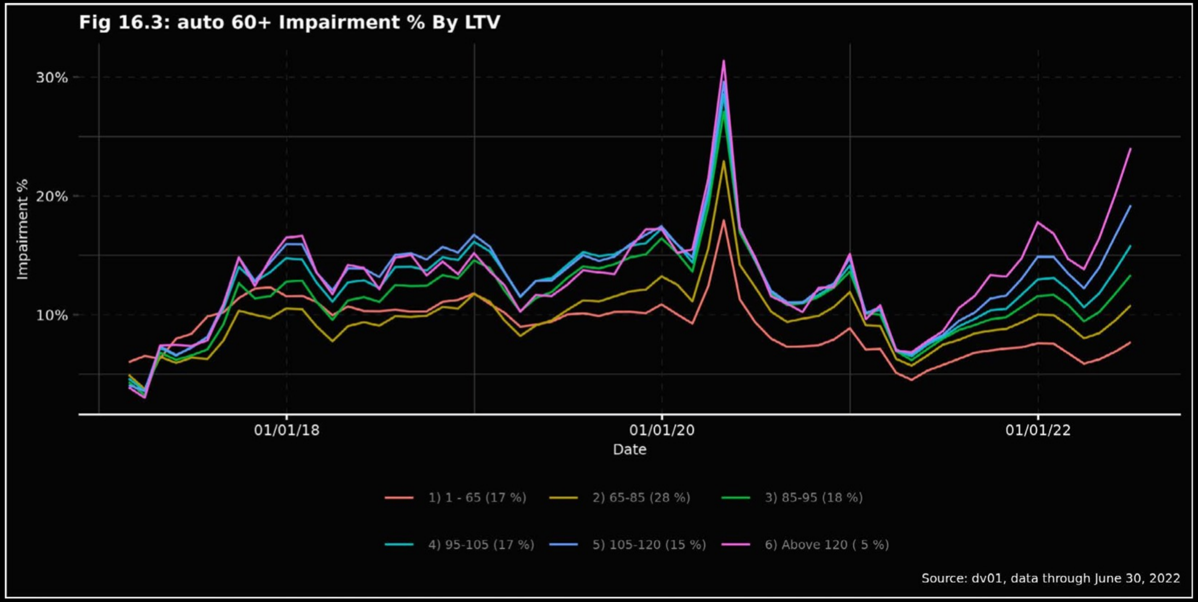


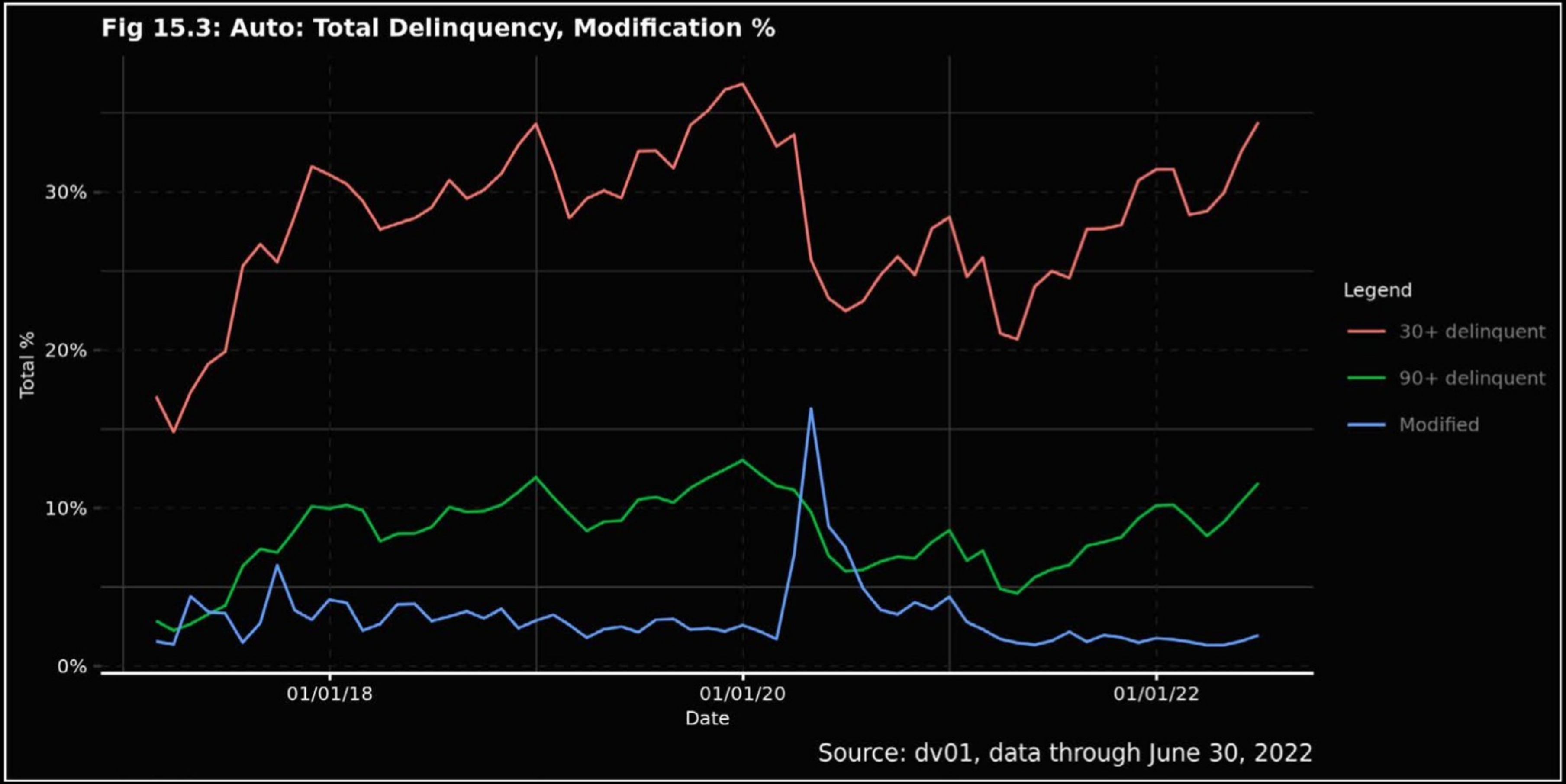
Fig 16.3: auto 60+ Impairment % By LTV

Source: dv01, data as of June 30, 2022

Impairment = DQ + Modification

Subprime Auto

Uptick in delinquencies but still below pre-pandemic highs



Source: dv01, data as of June 30, 2022

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We continue to see warping of risk scores due to the suppression of various risk signals

Student Loan Deferrals

- We have seen evidence of higher score inflation for new to credit & thin file (especially younger borrowers), one of the major reasons being the large number of student loan deferrals (92%)
- Historically, student loans have a relatively high delinquency rate and the majority of them have been muted because of deferral programs. This has caused lenders to put more young customers on their books than ever before. We are already seeing signs of stress in young cohorts at many of our partner banks

COVID-related Data Degradation

- Although a lot of the data degradation has alleviated, we still see remnants as a majority of the policies and models currently in use are still grounded on COVID-impacted data.
- This includes reduced delinquencies, foreclosures & bankruptcies due to deferral programs. Sharp reduction in balances & utilization, temporary increase in savings & deposit balances. Inflated risk scores and higher temporary cashflows due to unemployment benefits and govt stimulus

Buy-Now-Pay-Later (BNPL) trades

- These products are continuing a fast upward rise in usage. Unfortunately, these trades are not fully reported to the bureau yet – as such, the risk of these customers is not fully captured.
- This is leading to some muted risk signal among BNPL customers, as in-good- standing BNPL customers aren't getting credited for that performance while BNPL customers that go delinquent aren't seeing any impact to their overarching credit profile

Credit Builder Trades

- Risk signals on subprime customers are being warped by credit builder tradelines as well. These new platforms (e.g., Chime) create opportunities for subprime customers to get secured credit cards that feature selective bureau reporting, which (similar to BNPL) can both help and harm credit builder customers in different ways depending on their behavior on the card. Both credit builder & BNPL trades have also served as catnip for fraudsters

For more commentary and insights, please refer to the following 2OS whitepapers which discuss these in more detail

- https://2os.com/insights/credit-risk-quarterly-q1-2022-in-review/
- https://2os.com/insights/credit-risk-trends-in-the-covid-era/

Acknowledgments

This report was prepared by Syed Raza, Chase Nielsen, and Scott Barton.

- **Syed Raza, PhD** is a Data Science Manager at 2nd Order Solutions with 10 years of experience in quantitative modeling and 3+ years in the lending industry. He has built credit risk models for multiple financial institutions and advised clients across the consumer credit lifecycle. He specializes in credit research & COVID’s impact on unsecured lending
- **Chase Nielsen** is an Associate Principal at 2nd Order Solutions; with experience across all customer lifecycles of secured and unsecured lending. He has overseen multiple model development projects, including risk models for new account originations, customer management, and loss mitigation. Additionally, he has led model audit/diagnostics for both fintechs as well as larger issuers
- **Scott Barton** is the Founder and Managing Partner at 2nd Order Solutions; he has led hundreds of major initiatives for major banks and fintechs, including overhauls of Collection strategies, overarching model redesigns, and major architectural changes to organizational credit risk assessment. He previously was one of a handful of Senior Credit Officers at Capital One and led several business units, including Partnerships, Collections, Recoveries, and Fraud.

The authors would like to thank dv01, PeerIQ, Equifax, Experian, and the New York Fed for providing the data used to generate the insights in this work.

You may contact the authors by email at:

- Syed.Raza@2os.com
- Chase.Nielsen@2os.com
- Scott.Barton@2os.com

About 2OS

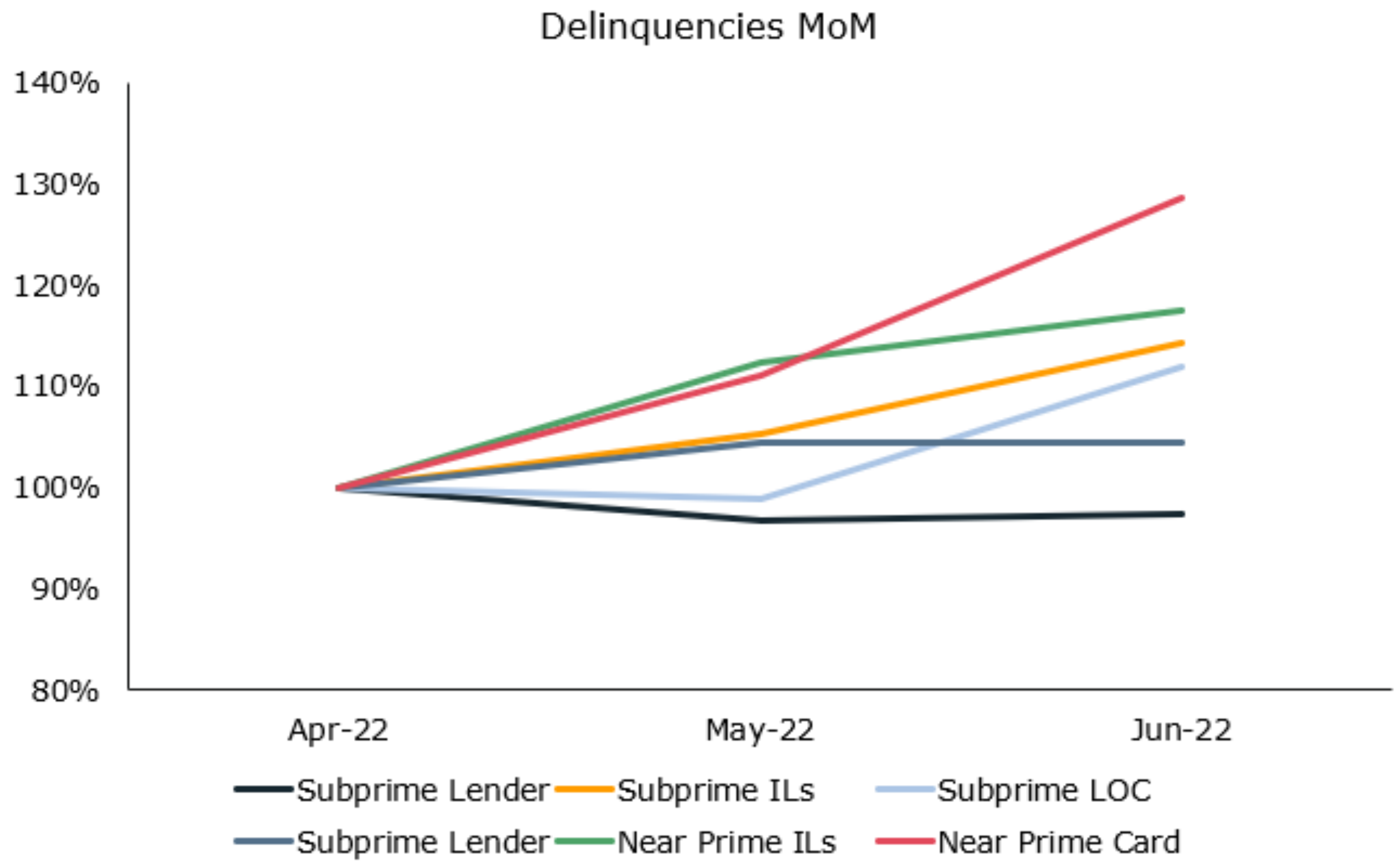
2nd Order Solutions (2OS) is a boutique credit risk advisory firm that specializes in solving the world's most challenging credit problems. 2OS was founded 12 years ago and consults to a wide range of banks, card issuers, fintechs, and specialty finance companies in the US and abroad.

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 lending, visit us at https://2os.com/insights/

Appendix

We are seeing the recent uptick in delinquencies across different lender categories



- Source: anonymized, data as of June 30, 2022

Increase in delinquencies but still below pre-pandemic levels

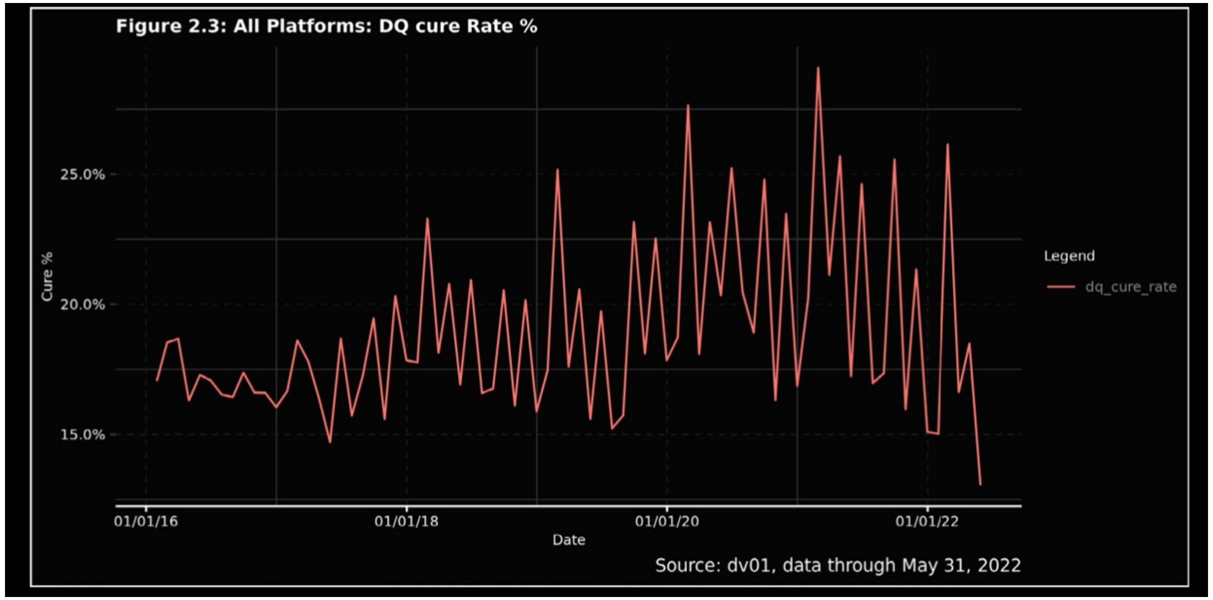
Impairment = DQ + Modification

Metric	June 2022	May 2022
Total Impairment	2.8%	2.4%
90+ Impairment	1.5%	1.4%
New Impairment (Total)	1.0%	0.6%
New Impairment (First-Time DQ)	0.4%	0.2%
Modification Rate	0.7%	0.7%

- Source: dv01, data as of June 30, 2022

We are also seeing a decrease in cure rates and increased roll rates

Cure rates

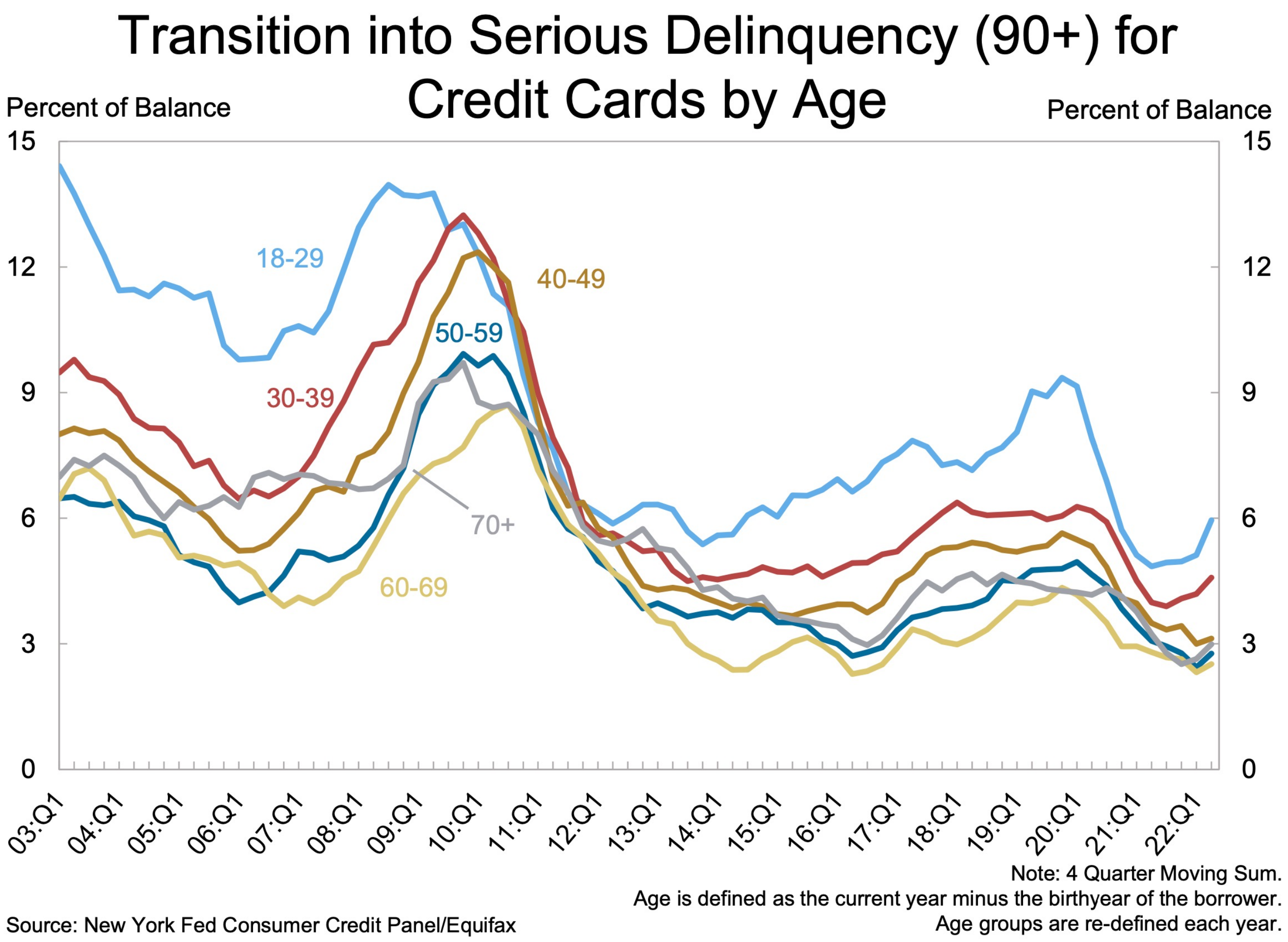


Roll rates

Metric	June 2022	May 2022
30-60 DQ Roll Rate	18.1%	18.1%
60-90 DQ Roll Rate	47.0%	43.6%
90+ DQ Roll Rate	72.5%	67.2%
DQ Cure Rate	35.8%	37.4%

- Source: dv01, data as of June 30, 2022

Younger cohorts' DQs are rising more sharply as the risk signal is somewhat muted due to the student loan deferral programs



- Source: NY FED 2022-Q2 data
- For more commentary on the impact of student loan deferrals, read our whitepaper https://2os.com/insights/credit-risk-trends-in-the-covid-era/