



Consumer delinquency...thank U, next

March 2019

Headlines on consumer delinquency have taken a negative spin. Recent auto delinquency data presented by the Federal Reserve Bank of New York (FRBNY) shows auto delinquency at near-peak levels, despite today's low unemployment. If this seems a bit inconsistent, we agree. It's important to examine exactly what is being reported as "delinquency" when reviewing this data.

That said, S&P/Experian data reveals there are weaker segments of consumers, which we believe are an important demographic trend. But in aggregate, as we see it, consumer performance, backing our investments in consumer ABS and housing, is generally strong. As far as problems go, we think consumers and housing feel good – leading us to the Ariana Grande approach to ex-boyfriends...*thank U, next!*

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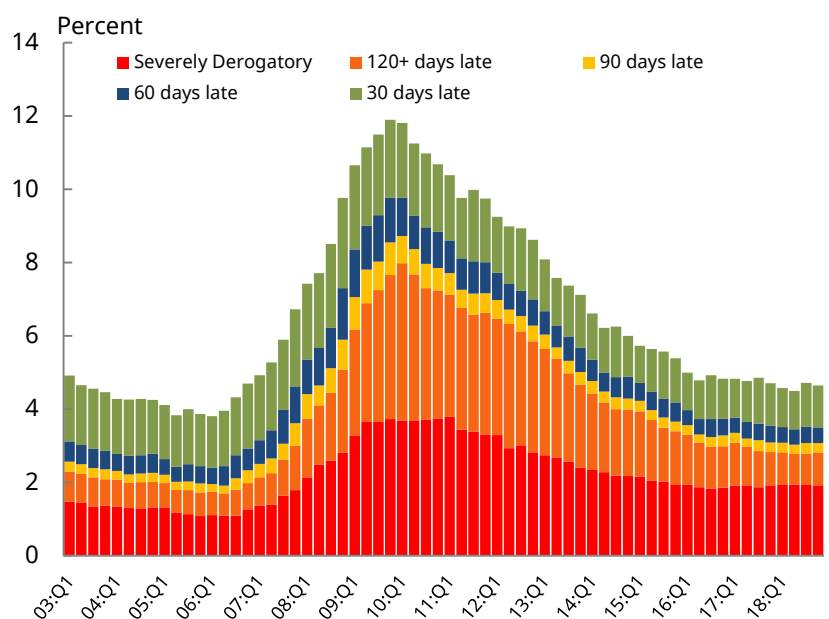


The US consumer currently enjoys the benefits of a low unemployment rate, rising wages and healthy levels of net worth. With the regulation pendulum still swung to the far right (that is, regulation post-crisis is heavy), the consumer balance sheet is healthy, deleveraged, and delinquency data underscores our confidence in the strength of the US consumer post-Global Financial Crisis (GFC).

To begin with the big picture, Figure 1 shows the history of aggregate consumer delinquency levels from Equifax and the FBRNY. These delinquency levels have recovered to the pre-GFC norms.

In the following series of charts, we illustrate two important pillars supporting consumer and, by extension, ABS and MBS. The first pillar is low levels of consumer defaults and mortgage delinquency rates, which have recovered to pre-GFC levels. The second pillar deals specifically with auto delinquency data and indices and ensures an apples-to-apples comparison. In conjunction with this delinquency pillar assessment, we challenge a common "narrative" that issuers of securitized debt take off balance sheet a group of receivables that are adversely selected. The superior performance of securitized credit card debt versus bank portfolio debt disputes this assumption.

Figure 1: Consumer delinquency is back to the low end of historical levels

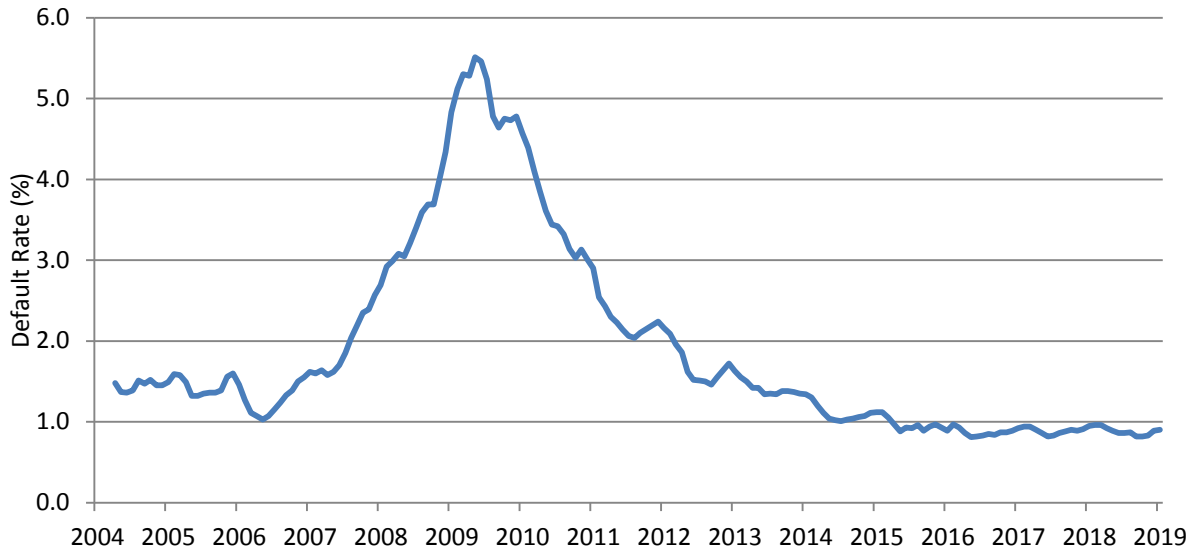


Source: New York Fed Consumer Credit Panel/Equifax, December 2018

Lastly, we break down consumers into groups to more closely examine the performance among age cohorts. Studying the age segmentation across debt types allows us to identify mortgage debt as positively biased from an age group/performance composition perspective.

Consumer credit performance has been strong, as is evidenced by the S&P/Experian composite default index, which continues to decline to new lows in consumer credit default rates (Figure 2).

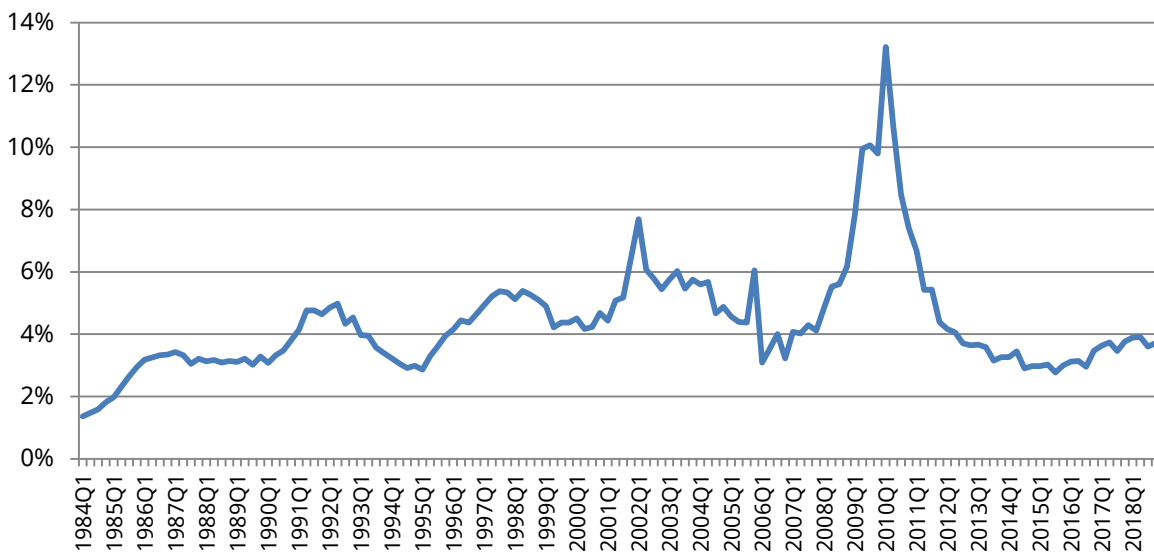
Figure 2: The S&P/Experian Consumer Credit Default Composite Index



Source: S&P/Experian, December 2018. The Composite index measures the default rates across autos, first and second mortgages and bank cards, and also offers investors a broader benchmark combining and measuring the default rates of all four indices included in the S&P/Experian Consumer Credit Default Indices.

For credit cards, net charge-off rates are also at the lower end of normal historical levels.

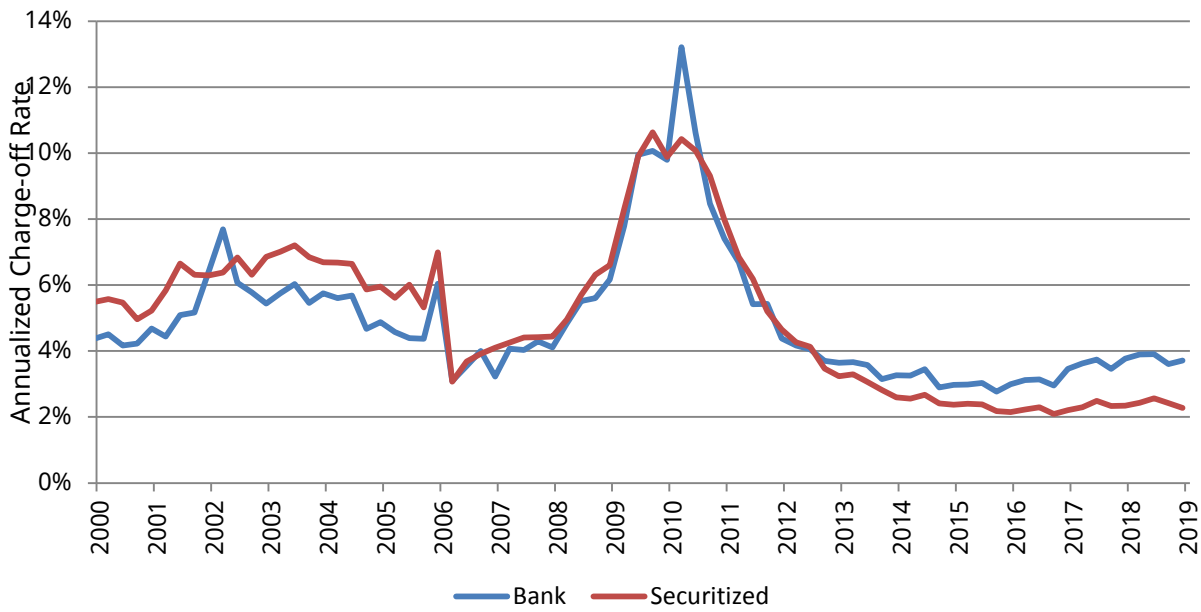
Figure 3: Net charge-off rate for credit cards



Source: FDIC, December 2018.

As well, credit card receivables in securitized trusts tend to perform better, post-GFC, than those on bank balance sheets (Figure 4 on next page). This debunks a popular critique that somehow ABS receivables are adversely selected.

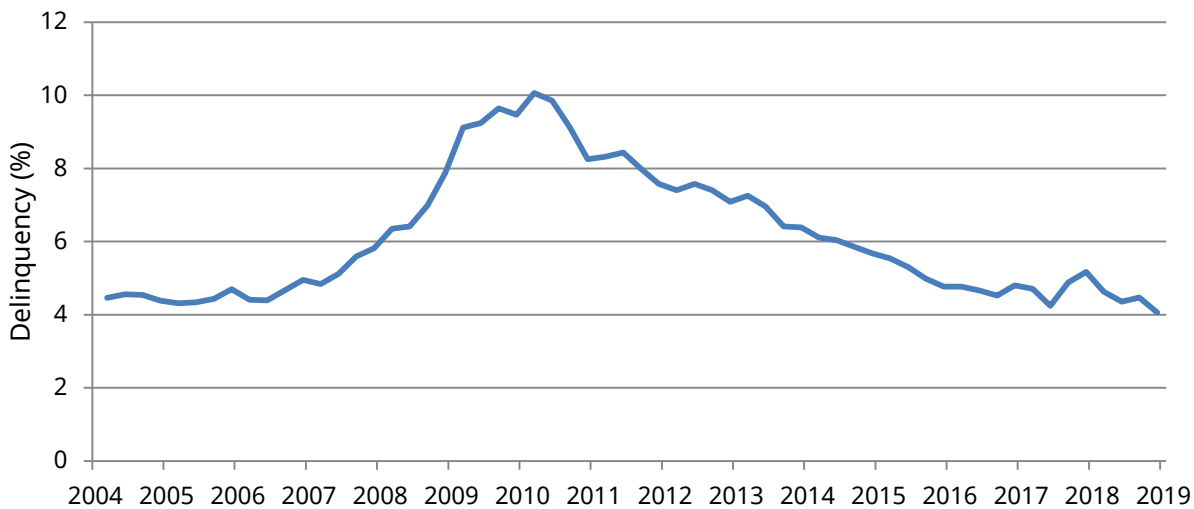
Figure 4: Net charge-off rate for securitized credit card debt versus bank receivables



Source: JPM, FDIC, Schroders, January 2019

As shown in Figure 5, mortgage loan performance is also healthy, with mortgage delinquency rates now back to pre-GFC levels. What a trip it has been!

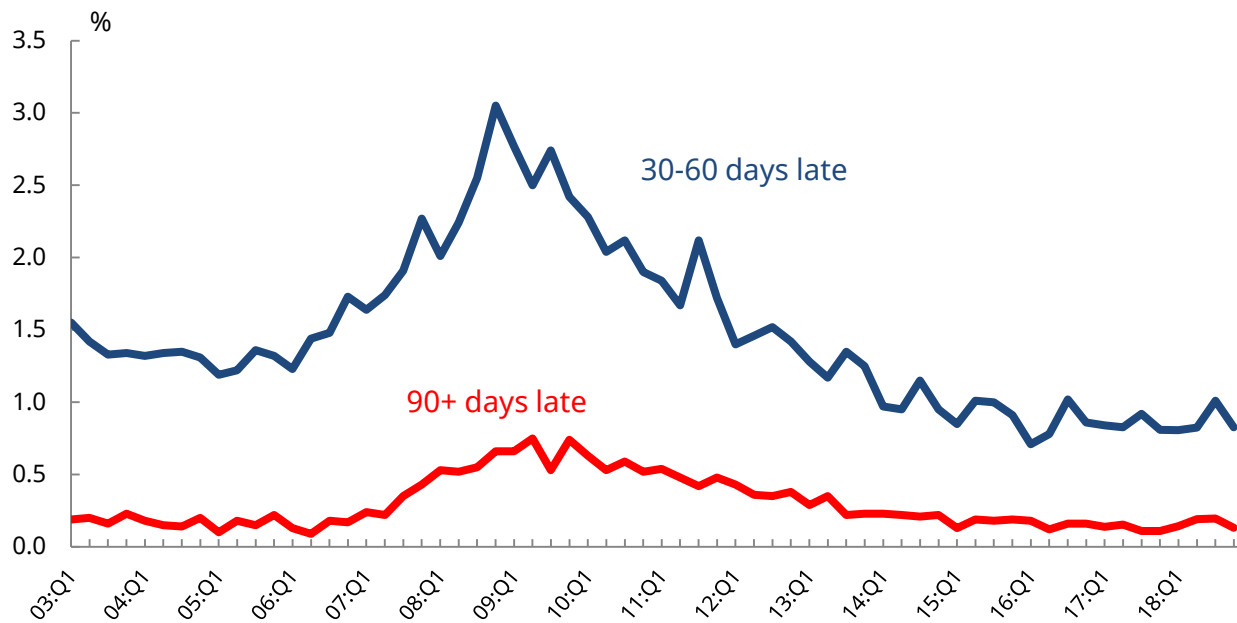
Figure 5: Mortgage delinquency rates have dramatically improved since the GFC



Source: Bloomberg, based on the Mortgage Bankers Association (MBA) Purchase Index, a widely used weekly measurement of nationwide home loan applications.

In addition, the rate at which mortgage borrowers go delinquent is back to very low levels (red line in Figure 6 on the next page).

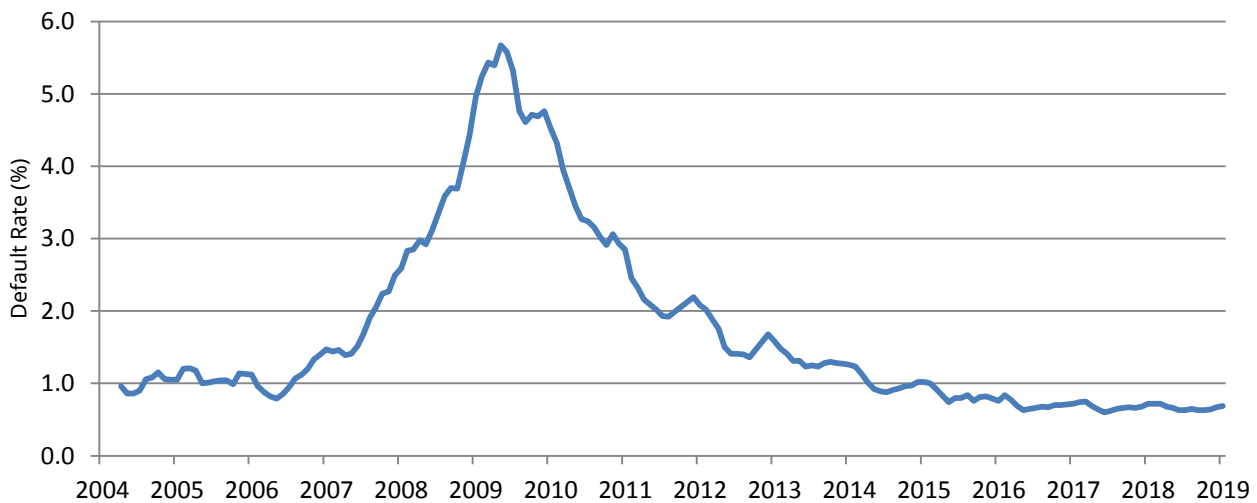
Figure 6: Quarterly transition rates for current mortgage accounts to delinquent stages are low. This is true for both seriously delinquent (90+ days) loans and early delinquency rates (30-60 days)



Source: New York Fed Consumer Credit Panel/Equifax, December 2018.

We also see that first mortgage default rates are back to historically low levels.

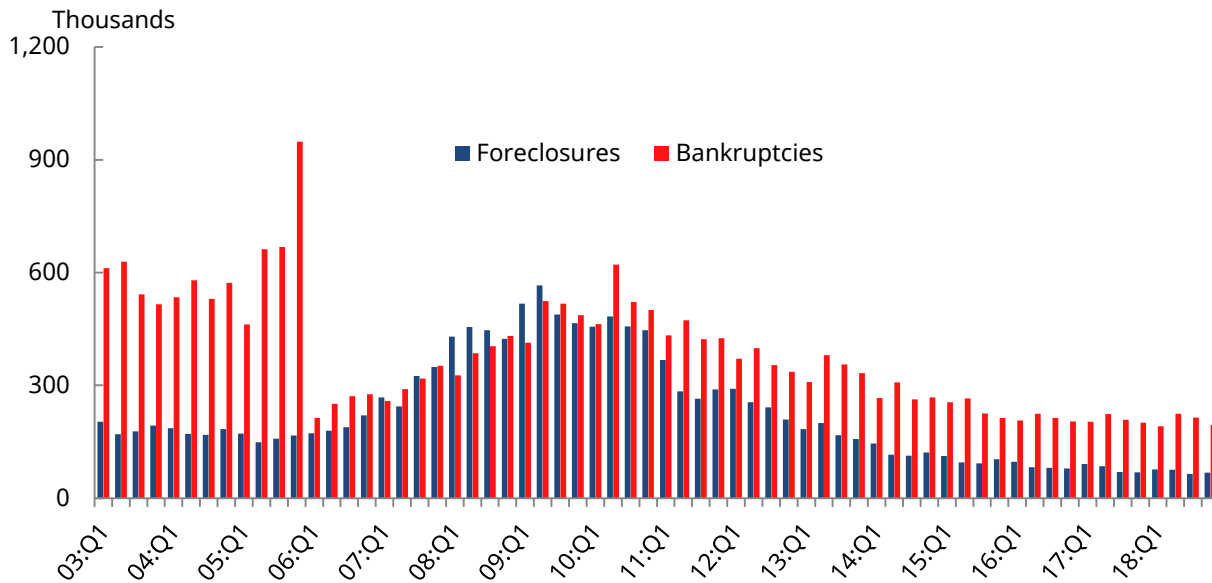
Figure 7: First mortgage default rates are also near historically low levels



Source: S&P/Experian, December 2018. Based on the S&P/Experian 1st Mortgage Default Indices.

In summary, when we look at basic consumer delinquency metrics, be they from secured (mortgage) or unsecured (credit card), we have seen a complete recovery post-GFC. This is not surprising given the length of time for servicing modifications to take place. As well, these numbers have recovered during a time when access to credit has remained quite limited due to regulation. As standards for lending have become tighter and unemployment has improved, new bankruptcies and foreclosures have materially declined.

Figure 8: New consumer foreclosures and bankruptcies remain low



Source: New York Fed Consumer Credit Panel/Equifax, December 2018

The Credit Card Accountability Responsibility and Disclosure (CARD) Act of 2009, Dodd Frank Financial Reform Act, Basel III and other regulations have continued to keep a tight rein on the credit spigot for consumers. In our view, when regulation is high, and consumer leverage is low, this is an attractive point in the credit cycle to look at debt backed by consumers and housing.

Auto pilot?

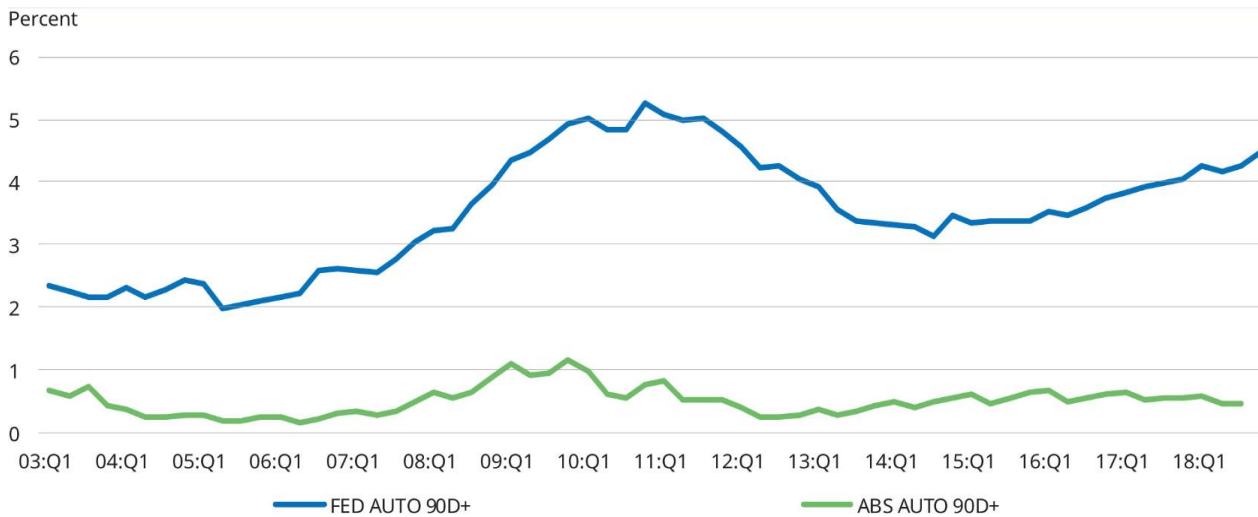
Recently, a widely reported FRBNY delinquency statistic caused some headlines and challenged the otherwise rosy picture we might paint of the broad US consumer. We will explain that story and underscore how important it is to understand the composition of these indices and metrics. We think the Fed's series is a good example of "fake news."

Figure 9 shows the FRBNY's series on auto loans 90 days or more delinquent. This series (the blue line) has now risen to near-peak levels, with the prior peak occurring just after the worst of the financial crisis, when there was a much higher level of unemployment. Clearly, if we just reviewed this series we would worry, both about the quality of underwriting, as well as the rise in this number in what is an otherwise benign unemployment environment. However, in Figure 9 we also illustrate the delinquency numbers for auto ABS securitization trusts, and the Fed's reported levels are much higher than what we see reported in ABS securitization. So, how do we reconcile these conflicts?

From what we can decode, the FRBNY's series includes in its reporting some loans that most delinquency indices would not include. The main culprit looks to be defaulted loan balances that have been charged-off (AKA already recognized as a loss). The rationale behind the FRBNY's inclusion of these defaulted and charged-off loan balances (which have already caused a loss in the past and cannot represent future loss) is that the balances are still collectible from the borrower. Even still, these charged-off loans can remain collectible for long periods and the impact on the index can be accumulated over periods of time (worse now than a year ago). As such, the FRBNY's picture is representative of a number that is impacted by the accumulation of charged-off and collectible debt, rather than a representative, current snapshot of delinquent loans over time.

In contrast, the Wells Fargo ABS auto 90+ index excludes charged-off loans and evidences the low absolute level of delinquency. The level remains below what was seen back in the GFC time period (2008-2009).

Figure 9: Charged-off assets distort the picture among securitized assets, especially post-GFC

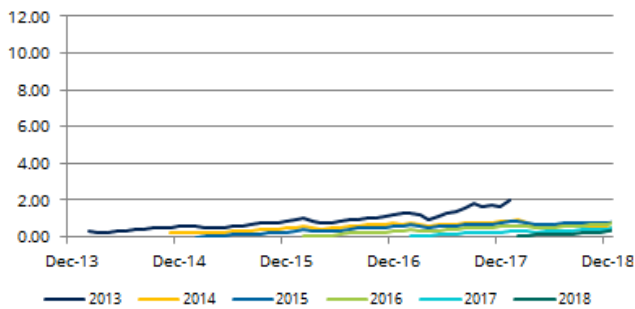


Source: Federal Reserve Bank of New York, Wells Fargo, December 2018. Auto ABS 90+ DQ data is a weighted-average of our prime and non-benchmark subprime auto ABS indexes. The weights come from the FRBNY's auto loan outstanding data of which about 75% is prime, and 25% subprime.

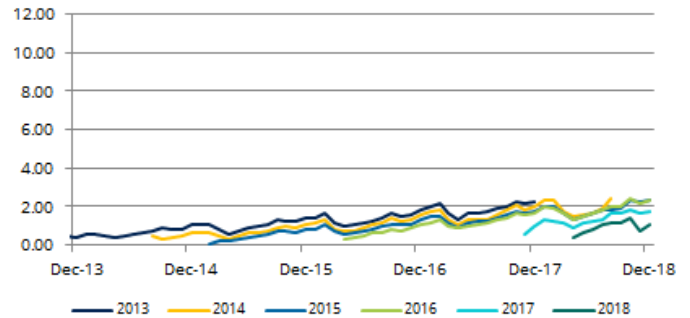
There is a difference in delinquency for auto loans based on borrower quality. Deep subprime borrowers represent around 20% of the subprime lending (roughly \$200 billion of \$1 trillion). There has been growth in deep subprime lending as Private Equity (PE) and Venture Capital firms have invested in deep subprime auto lenders and pushed volumes. The figure below shows the difference in delinquency rates across the different borrower segments of auto borrowers. Acknowledging that auto ABS securitizations of deep subprime borrowers have higher levels of subordination, we do find a higher risk in securities backed by loans originated and serviced by PE-owned, deep subprime lenders.

Figure 10: Auto delinquency varies with borrower quality

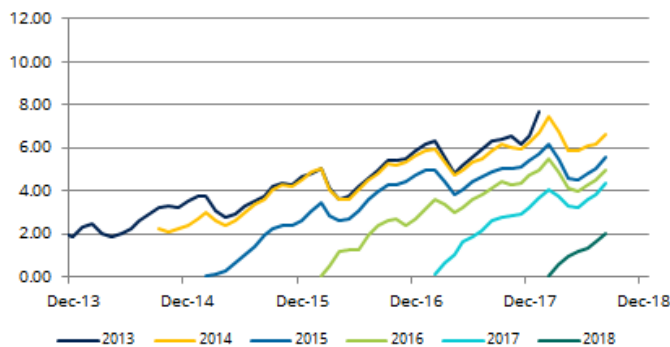
Prime (FICO > 700)



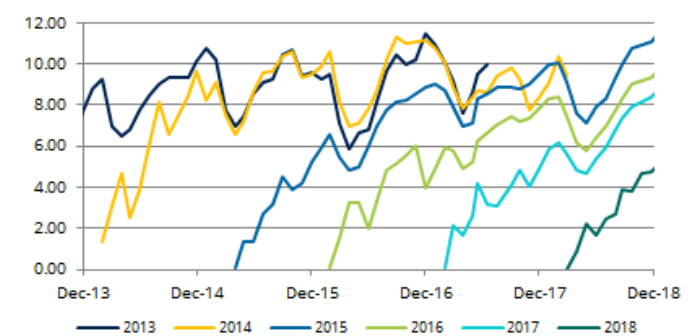
Near Prime (FICO 620-700)



Subprime (FICO < 620)



Deep Subprime (FICO < 550)

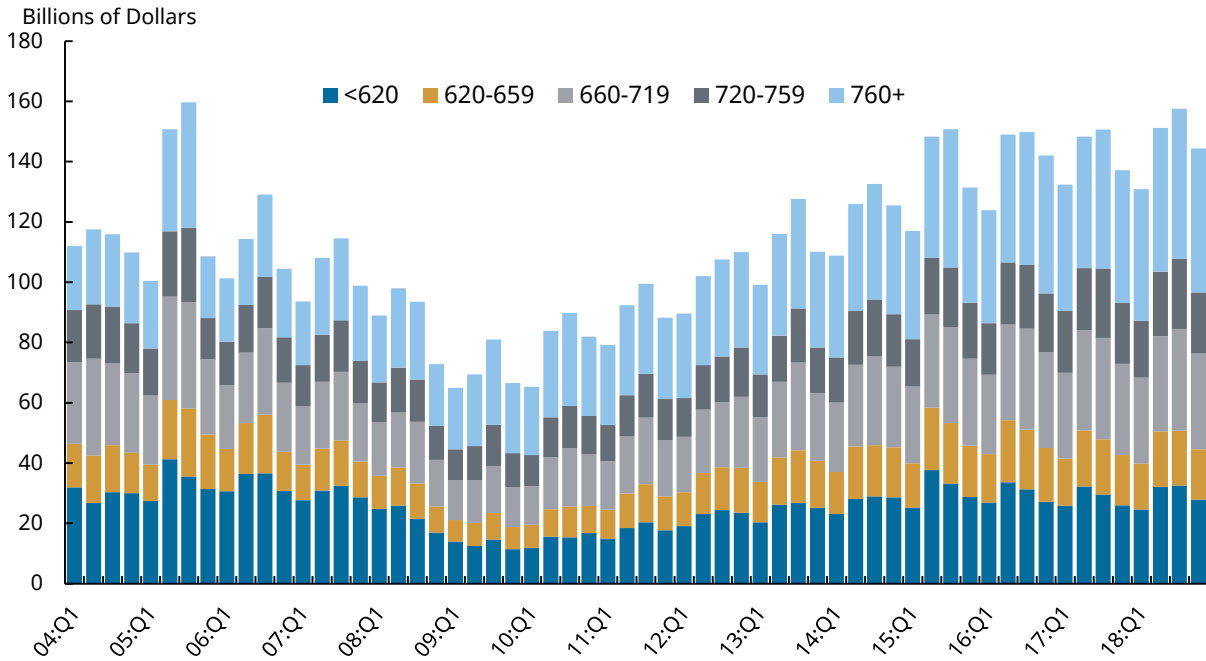


Source: Intex, 2018. Note: Near prime data is from AFIN transaction (\$16bn), and deep subprime data is from DRIVE and ACA transaction (\$37bn).

We learn things from past cycles. One taught me patience, one taught me pain, now I'm so amazing...look what they taught me, thank U, next.

For consumer and mortgage debt, the pendulum of regulation swung dramatically to "heavily regulated" post-GFC. As a result, lending has remained constrained. Figure 11 illustrates this, where we see the reduction in mortgage lending to borrowers with lower credit scores.

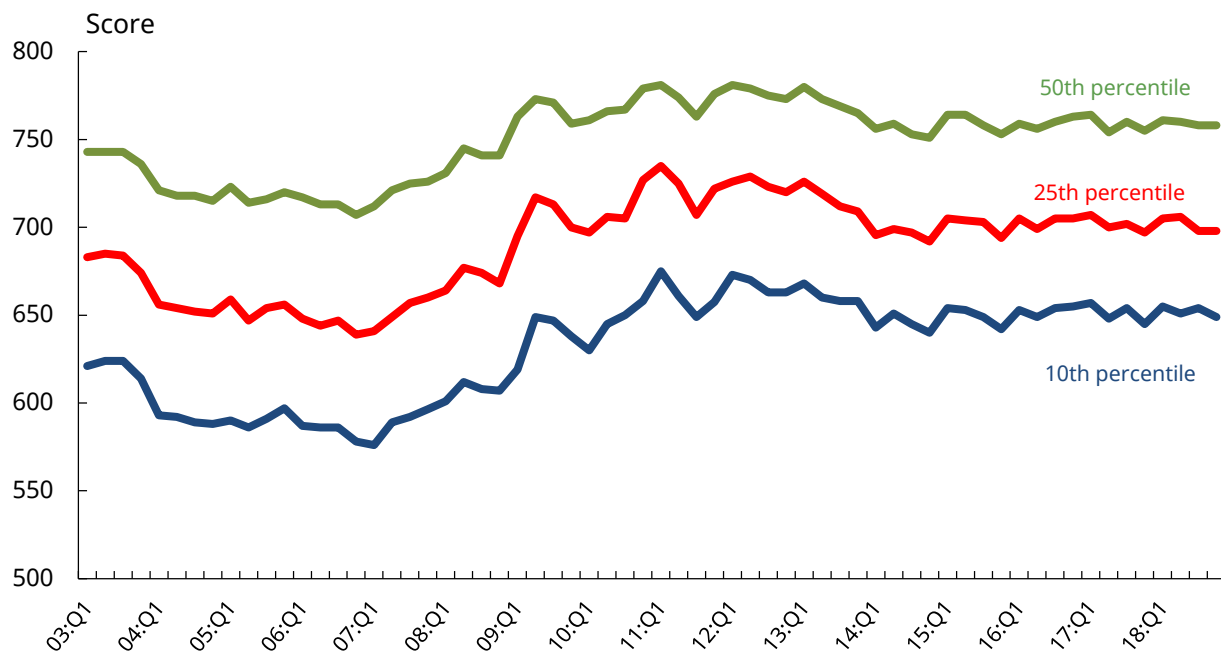
Figure 11: Mortgage originations by credit score range



Source: Source: New York Fed Consumer Credit Panel/Equifax, December 2018. Credit Score is based on the Equifax Risk Score 3.0.

While these standards reduced, moving into the GFC, they have improved substantially and haven't changed much post-GFC, as we see in Figure 12.

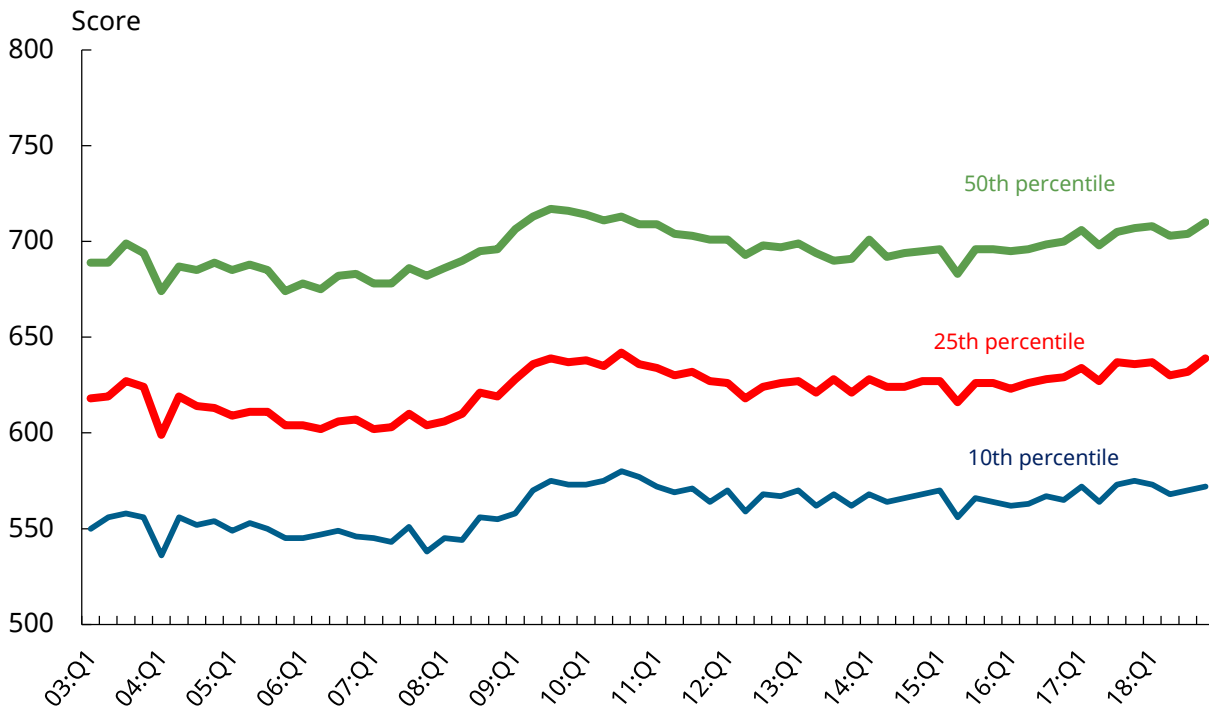
Figure 12: Credit score standards for mortgage applicants have remained stable for the past five years



Source: New York Fed Consumer Credit Panel/Equifax, December 2018. Credit Score is based on the Equifax Risk Score 3.0. Mortgages include first-liens only.

Auto lending has grown in volume, but lending standards are now similar to pre-crisis standards, having expanded slightly from the most stringent level seen in 2009-2010.

Figure 13: Credit score standards for auto loan applicants have also remained stable for the past five years



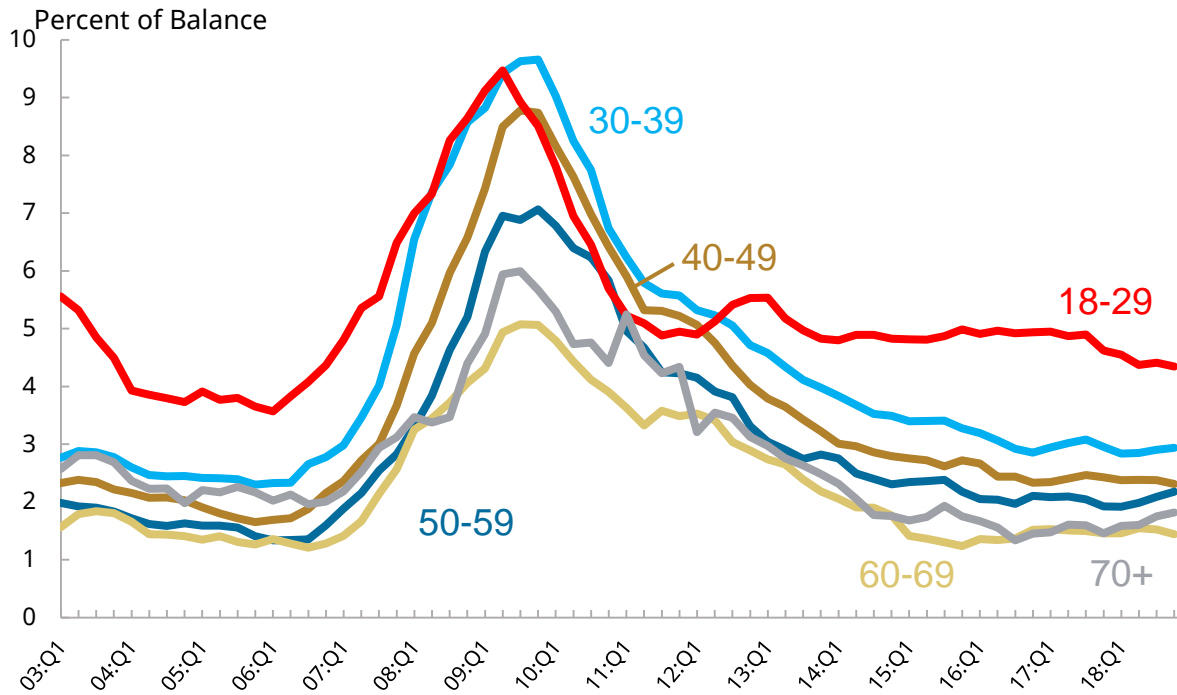
Source: New York Fed Consumer Credit Panel/Equifax, December 2018. Credit Score is based on the Equifax Risk Score 3.0. Mortgages include first-liens only.

Is there any differentiation required?

While the overall numbers comfortably support our thesis about the consumer being earlier-cycle, it is important to consider there are pockets of strength and weakness within the aggregate. If we break down the consumer based on demographics, a determinant factor in debt repayment health seems to be **age**.

When reviewing auto loan performance by age, the weakest cohort (and the only cohort not improving) is the youngest borrower, ages 18-29. This was true both before the financial crisis, and it remains so today. When we look at all consumer debt, this is also the main age group that seems to have a harder time with repayment. Though the delinquency is not getting any worse, it is not improving either, and as this age cohort increases its debt relative to other age groups, we think it may be affecting the overall trend. We see this validated by the red line in Figure 14.

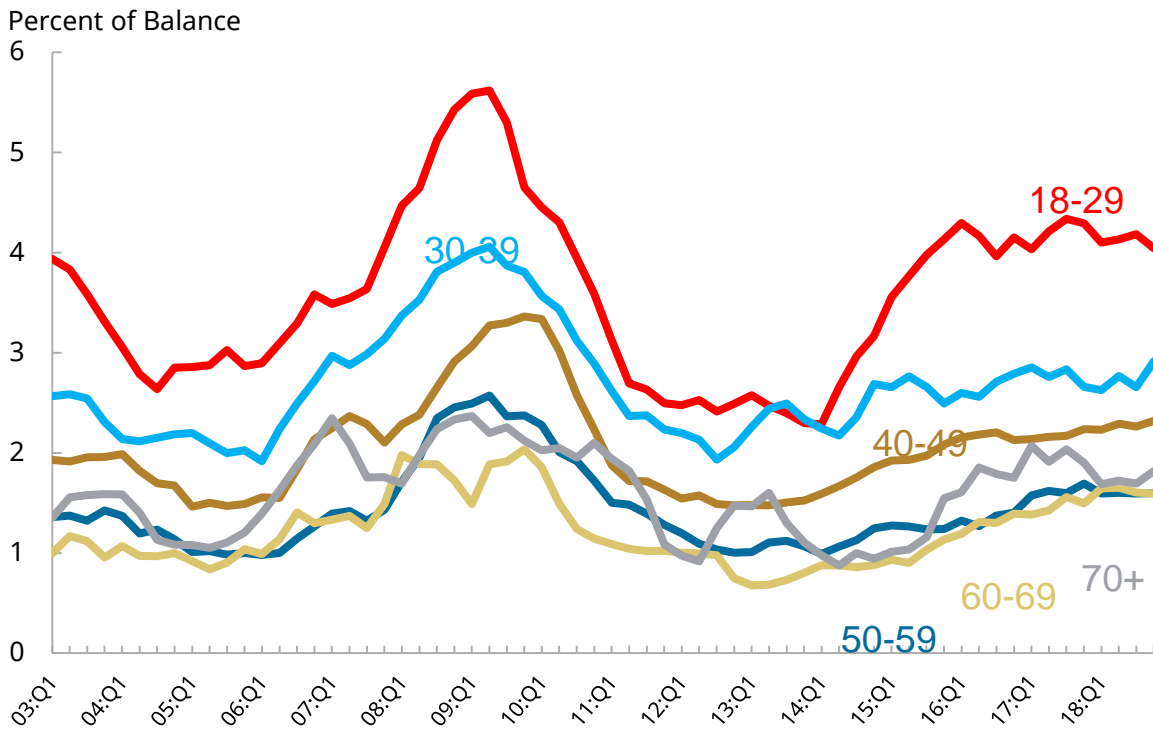
Figure 14: A noticeable cohort effect with serious delinquencies (90+ days) since the GFC



Source: New York Fed Consumer Credit Panel/Equifax, December 2018. Note: 4 Quarter Moving Sum. Age is defined as the current year minus the birth year of the borrower. Age groups are redefined each year.

This same borrower-age cohort (18-29) is more likely to transition to serious delinquency for their auto debt as well.

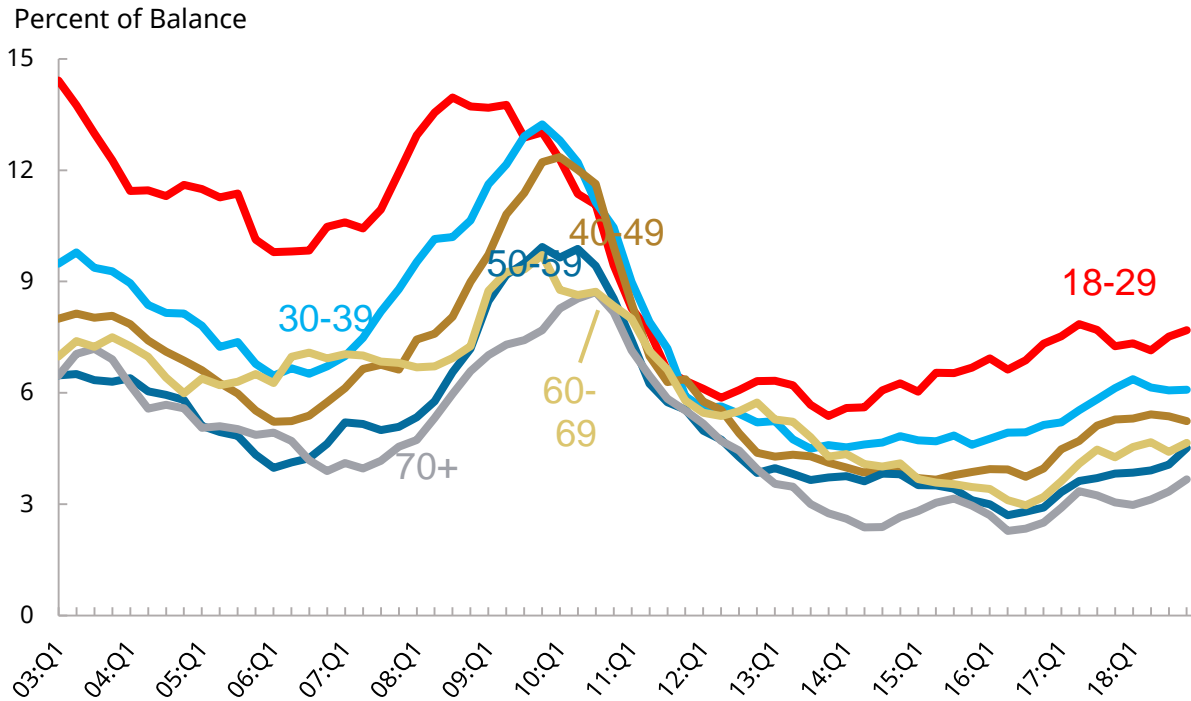
Figure 15: A similar trend among auto loan delinquencies (90+ days) ...



Source: New York Fed Consumer Credit Panel/Equifax, December 2018. Note: 4 Quarter Moving Sum. Age is defined as the current year minus the birth year of the borrower. Age groups are redefined each year.

The same is true for consumer delinquency such as credit cards.

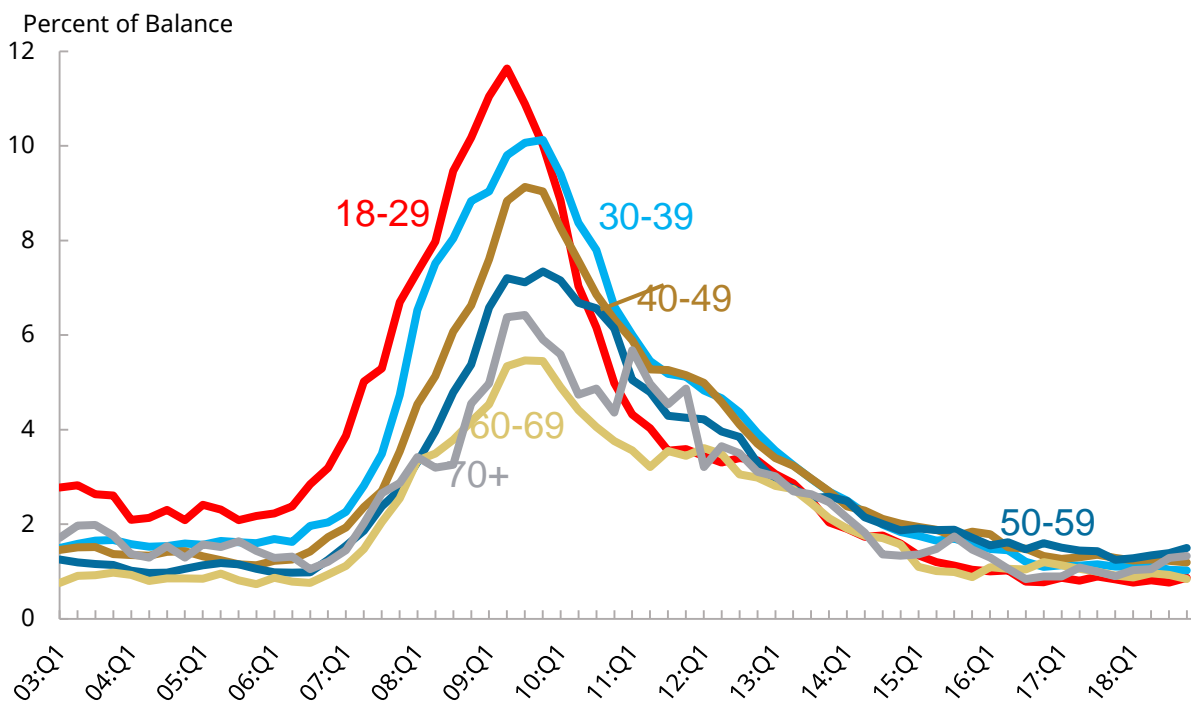
Figure 16: ...and credit card delinquencies (90+ days) ...



Source: New York Fed Consumer Credit Panel/Equifax, December 2018. Note: 4 Quarter Moving Sum. Age is defined as the current year minus the birth year of the borrower. Age groups are redefined each year.

On the contrary, we see less of an age effect in mortgage delinquency post-crisis, though the impact is there pre-crisis. This could potentially be the result of the most extreme credit standard tightening being within the mortgage lending sector.

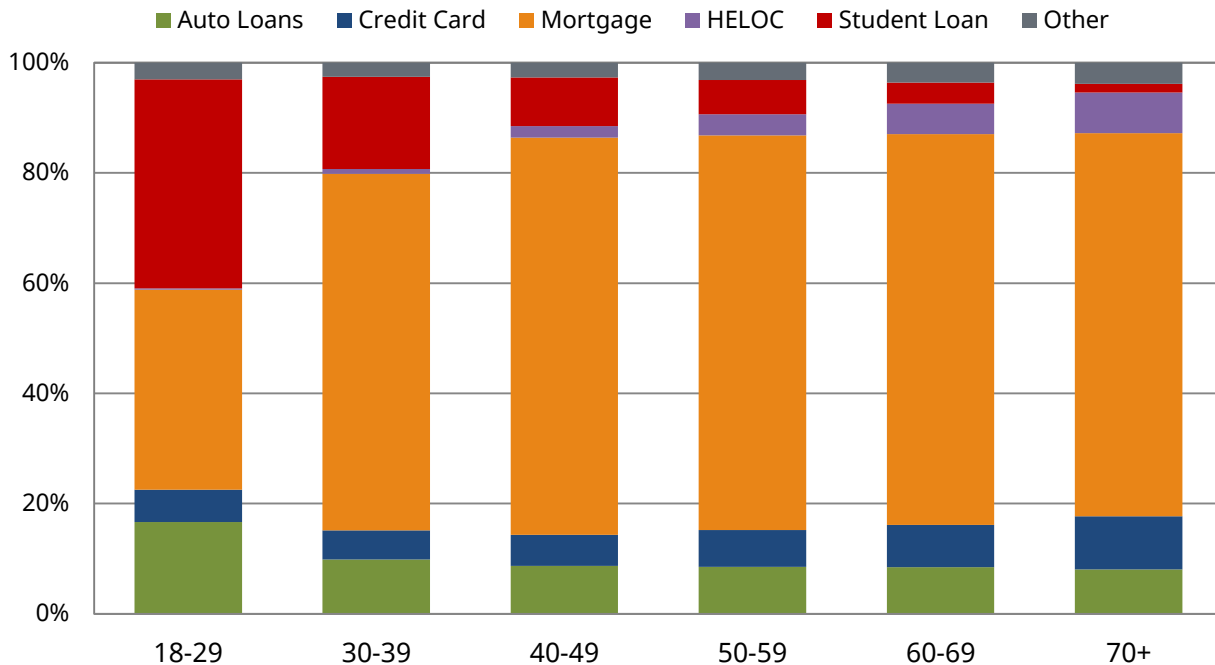
Figure 17: ... but less so with mortgage delinquencies (90+ days)



Source: New York Fed Consumer Credit Panel/Equifax, December 2018. Note: 4 Quarter Moving Sum. Age is defined as the current year minus the birth year of the borrower. Age groups are redefined each year.

Our view on this is that given the very tight limitations on mortgage credit, only the more creditworthy younger borrowers would have access to this type of lending. In fact, in Figure 18 we see the breakdown of debt by cohort, and what's clear is that fewer 18-29 year olds have mortgage debt. However, they have much more student loan debt than any other cohort. It's reasonable to surmise that this additional debt burden makes it more difficult to meet debt-to-income requirements for obtaining a mortgage, or save for a 20% mortgage down payment.

Figure 18: Debt share by securitized product illustrates the differences by age group



Source: New York Fed Consumer Credit Panel/Equifax, December 2018. Note: 4 Quarter Moving Sum. Age is defined as the current year minus the birth year of the borrower. Age groups are redefined each year.

Conclusion

This data, in aggregate, illuminates that the overall performance of the consumer in terms of debt repayment in the US is quite good, by historical standards. This performance is an important consideration that is not well represented by commonly-sourced Government agency reports such as the NY Fed auto delinquency data.

Within the ABS and MBS market, there are many different types of consumer asset-backed securities, and it is possible to use the segmented delinquency data to help refine a portfolio exposure, with a focus on securities having exposure to more desirable (stronger) fundamentals, or use it to limit exposure through the addition of structural protection within less desirable sub-sectors with weaker exposures. For example, avoiding student debt – which is more concentrated in the 18-29-year-old age cohort – or avoiding marketplace lending and deep subprime autos, while embracing autos, credit card, or mortgage-backed securities, could be an effective way to minimize exposure to the aforementioned cohort effect. This of course is all also impacted by pricing. We currently believe that current market pricing does not compensate for tiering differences or performance differences or liquidity differences. This is one of the strong benefits of ABS –the ability to be selective in both the type of collateral as well as the degree of structural protection, or credit exposure, in light of the compensation offered in the market price.

We believe the overall level of delinquency has recovered. This current low level of delinquency is supportive of many of the MBS and ABS securities backed by consumer debt. This is especially attractive given the current low unemployment and rising wages. On a separate note, we believe the younger cohort of the population, who may have found employment prospects more challenging, are likely to begin seeing more of a benefit to the accommodation provided by central banks, which will continue to press through full employment. This will be interesting to watch, as we can see if the improved economy outweighs the burden of the additional student loan debt for this age cohort.

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