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## Forecasting the Impact of the COVID-19 Recession on Consumer Credit Losses

Consumer credit losses will be high and will vary greatly by region, credit score, and asset class

Just as the impact of COVID-19 on the physical health of Americans may vary greatly by location and other demographics, so too could the effects on their financial health. Using delinquency and loss data on the universe of US households, we will describe these impacts under the most likely scenarios given recent epidemiological and economic data. We begin the analysis at the national level and then explore deeper areas where there is an elevated potential for loss by comparing states, credit score bands, and asset classes.

We find that the increase in losses should be less severe than the decline in the economic situation as a whole, but that the recovery will be more gradual. This is because households entered the recession with strong credit positions and there is assistance from programs targeted at their solvency. The timing and generosity of these programs will have a large impact on when the wave of losses will begin. Nevertheless, substantial losses will eventually come.

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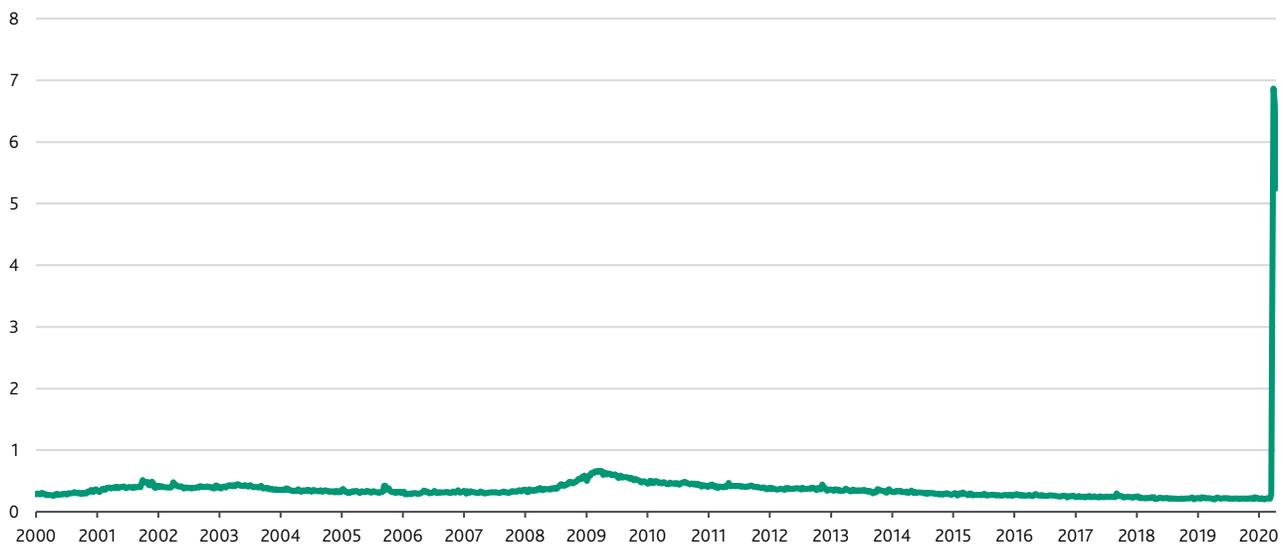
## Macroeconomic Environment and Forecast Scenarios

### The current environment

Since the end of 2019, the coronavirus has spread around the globe, becoming a worldwide pandemic in March. An important part of the response to this has been to shut down aspects of the economy that require human contact, and have been deemed non-essential, to stop the spread both across and within borders. This has included air travel, much of retail, and many services such as restaurants. Consequently, economic activity around the world has slowed down greatly, to the point where most of the world is in recession (or will be once the length of the downturn is long enough to qualify).

In the United States, the speed and severity of this slowdown is perhaps most clearly seen in the recent unemployment insurance claims results. In Figure 1, we plot the weekly values of this series: a complete stop in many industries has forced workers to apply for unemployment insurance en masse, resulting in an all-time record being set in consecutive weeks. When forced closures are coupled with a fiscal stimulus package that increases the value of unemployment insurance benefits, we should expect unemployment to remain high.

Figure 1 Initial claims, millions, seasonally adjusted, weekly

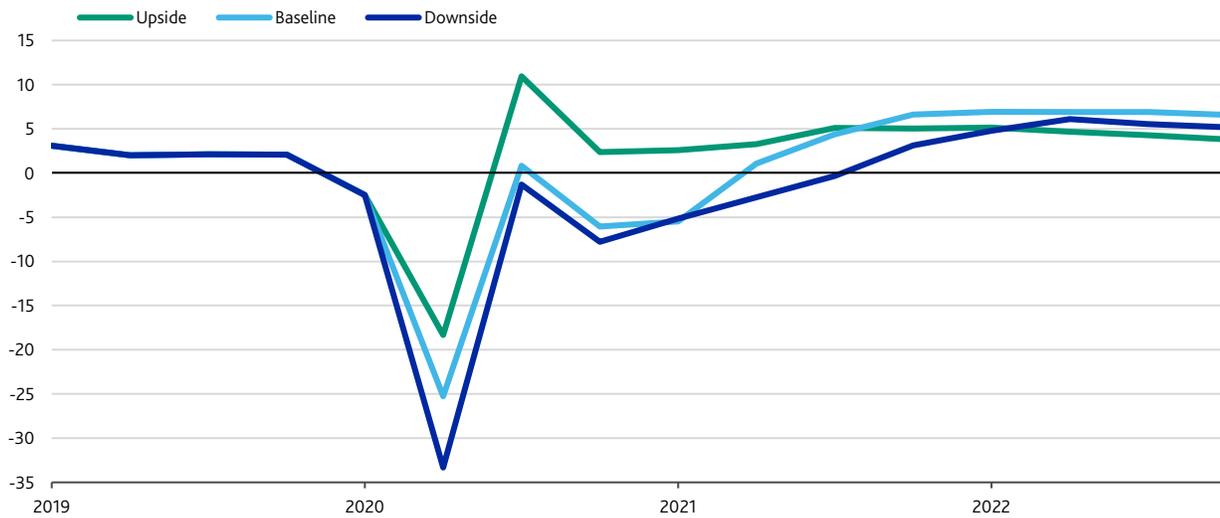


Source: Employment and Training Administration, Moody's Analytics

### Forecast scenarios

The speed at which the virus has spread and the resulting impact on the economy has forced a rapid update to the economic forecasts. Our initial baseline forecast released in early March was only slightly worse than the baseline forecast released in February. By mid-March, the outlook was much worse as the scope of countermeasures required to fight the pandemic was finally understood, and so another set of forecasts was released as the "March Mid-cycle Update" at the end of March. In Figure 2, we plot three likely scenarios for the path of real GDP growth, given recent epidemiological and economic data and government responses, including aid and social distancing measures. In Figure 3, we plot the same scenarios for the unemployment rate. These scenarios are from the March Mid-cycle Update.

Figure 2 Real GDP growth, annualized percent change

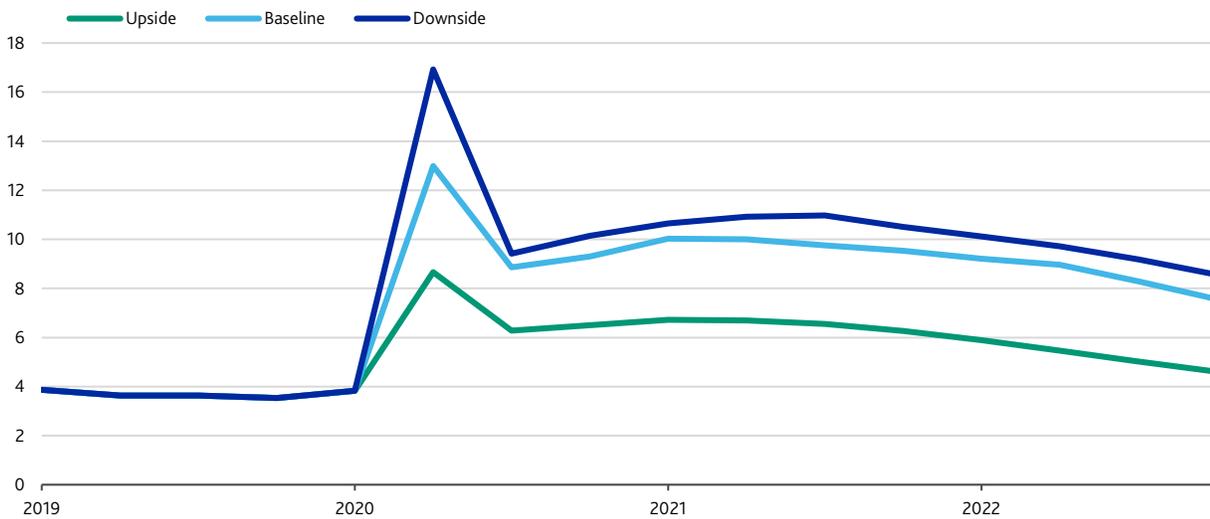


Source: Moody's Analytics

Each of these forecasts describes a deep recession, so the monikers “upside” and “downside” should be interpreted with this in mind. All include a severe drop in output in the second quarter followed by quick improvement as social distancing measures are expected to be relaxed and the benefits of stimulus kick in. The improvement in the upside scenario results in positive growth in the third quarter of 2020, due to a quick recovery and the effects of a variety of stimulus packages, before leveling off at a slightly lower level thereafter. The baseline and downside do not achieve this level of growth, which remains negative through most of 2021 (apart from Q3 under baseline, which marginally exits decline).

The unemployment rate follows a similar but opposite pattern, as unemployment increases quickly before rebounding in the third quarter. This assumes that many of the businesses that were forced to shutter can reopen. Under each scenario, the unemployment rate then increases slightly as the effects of the stimulus begin to diminish before gradually returning to their long-run rates over several years.

Figure 3 Unemployment rate, percent



Source: Moody's Analytics

As our naming convention differs from the standard Moody's Analytics scenarios, we have provided a table to compare and summarize these scenarios. Table 1 shows the peak of both the unemployment rate and real GDP decline, and references the standard scenario names. Hereafter, we will refer to each scenario by either using the names defined above or peak unemployment values, unless otherwise noted.

**Table 1** Scenario summary and comparison

SCENARIO	STANDARD NAME	PEAK STRESS	
		REAL GDP GROWTH	UNEMPLOYMENT RATE
Upside	Baseline	-18%	9%
Baseline	S3	-25%	13%
Downside	S4	-33%	17%

Note: Under the standard naming convention, the forecast vintage is the March Mid-cycle Update.

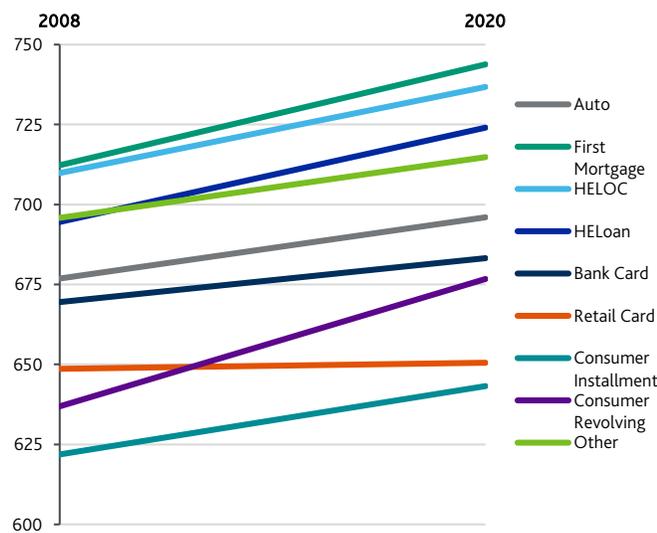
Source: Moody's Analytics

### The Impact on Consumer Credit Losses

The effect of business closures and other symptoms of the pandemic will be acutely felt in the consumer credit market. Performance of these assets has historically been very sensitive to changes in the state of the job market, and this recession will be no different. Given this historical relationship and the rapid and severe increase in unemployment—most clearly shown by the jump in initial claims plotted in Figure 1—we might have concluded that a similar pattern will emerge for the change in loss rates. Instead, we expect any degradation in consumer credit to be more drawn out than the sudden jump in claims suggests for a few reasons.

First, the starting point of household balance sheets is strong. Banks have kept lending standards tight on most products. Heading into the recession, consumers were generally current on their accounts as portfolios showed low rates of delinquency and default.

**Figure 4** Average credit score by asset class



Note: Averages are measured in September 2008 and January 2020; average is weighted by balance.

Source: CreditForecast.com, Moody's Analytics

of debt payments over the last 10 years. This has also contributed to higher credit scores.

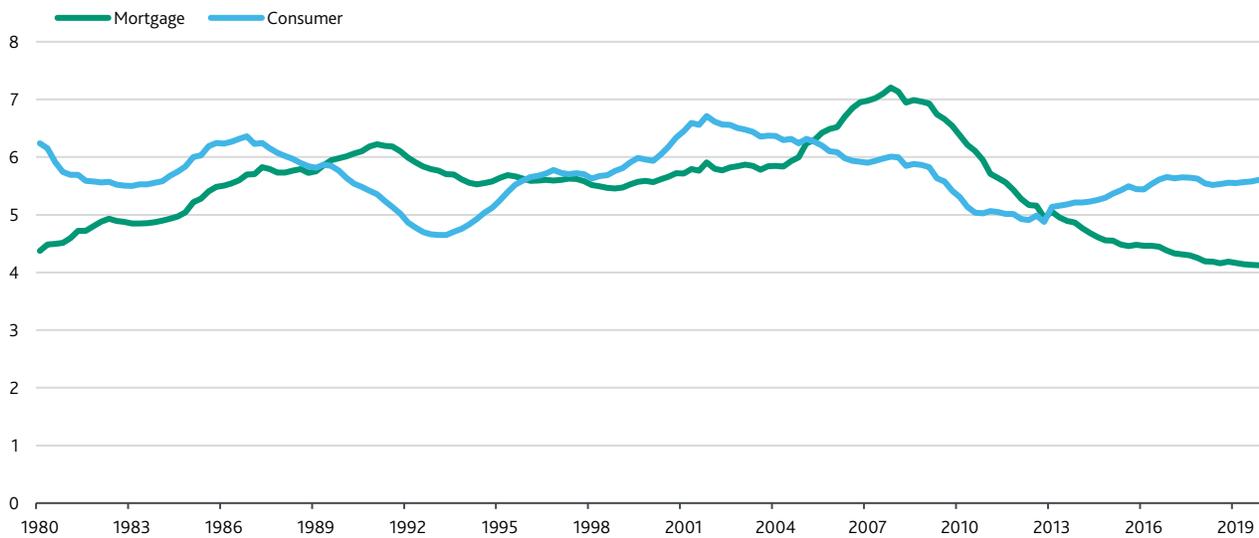
As an indication of how borrower creditworthiness has changed since the Great Recession, in Figure 4 we plot average credit score by asset class, weighted by balance, in the lead-up to that and our current recession. The average credit score in every asset class has improved, most by 15 to 30 points. First mortgage improved by 32 points and consumer revolving by 40. Retail credit improved least, at a two-point jump. While some argue that credit scores can be manipulated, by many objective measures borrowers are better off. For example, mortgage debt levels are near historic lows and consumer debt levels are below average, as seen in Figure 5. Even credit card utilization is 87 basis points lower now than when Lehman Brothers collapsed.<sup>1</sup>

In part, this is explained by tighter lending standards. Lenders cleaned up their balance sheets after the Great Recession, and most lending went to very creditworthy borrowers. It took years for these standards to loosen again. It is also explained by the sustained period of economic growth. As we have experienced little economic stress in the intervening years, most households have been able to achieve a strong record

<sup>1</sup> According to CreditForecast.com, the utilization rate of a bank card is 21.49% in March 2020 while it was 22.36% in September 2008.

Second, the fiscal policy response from the federal government and the programs initiated by the Federal Reserve should provide liquidity to households that are at risk of missing payments by providing cash payments and mandating relief from debt obligations in the short term. This is in addition to the payment assistance provided by the lenders themselves.<sup>2</sup> Their actions include deferral programs, waiving late fees, and suspending foreclosures and car repossessions. If a consumer is current when an accommodation is granted, the CARES Act dictates that they continue being reported as current to credit bureaus. This type of assistance will be a critical lifeline as missed payments might restrict access when borrowers need it most.

**Figure 5** Debt service burden ratio, mortgage and consumer, percent



Source: Federal Reserve Board, Moody's Analytics

Together, these factors have the potential to mitigate and prolong defaults. The strong starting point of household finances implies most accounts were recently current and have some room to run before they default. This runway should be extended even further after accounting for assistance from the government, the central bank, and lenders.

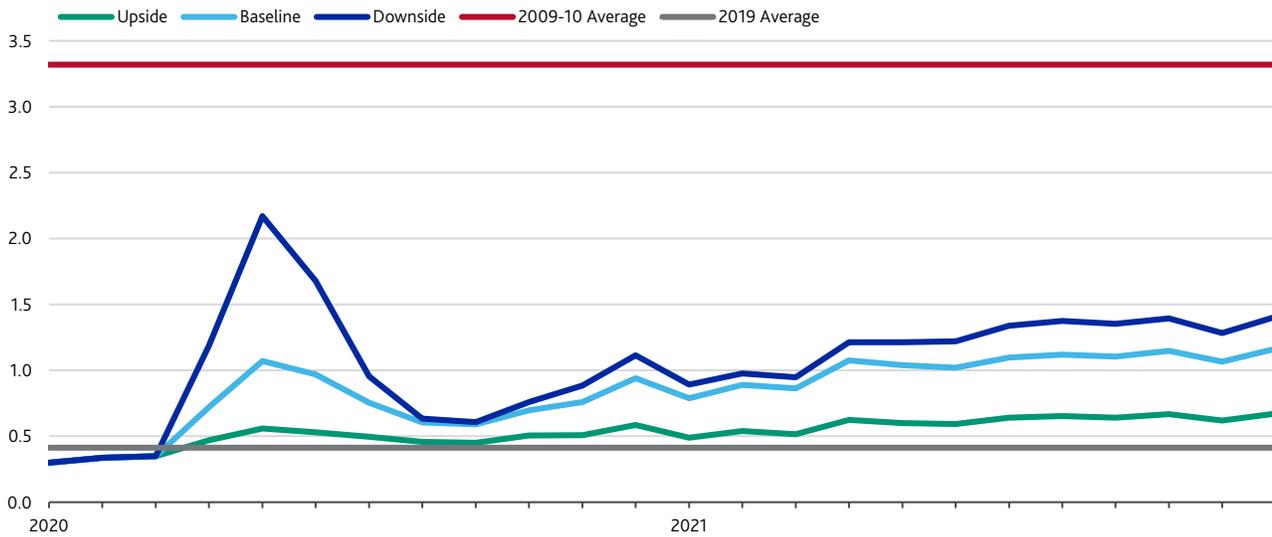
**How will the various asset classes fare?**

To better understand the effect of the coronavirus recession, we present the gross loss rates for the first mortgage, bank card, and auto loans sectors under various forecast scenarios in the following figures. To provide historical context, we include in each plot the average loss rate for 2019 and for 2009-2010 (post-Great Recession), which together provide rough bookends for the range of historical loss rates in recent history.

In Figure 6, we see a large increase in expected gross loss rates for first mortgage. For the upside scenario, the peak loss rate is only 20 basis points higher, but this elevated rate persists throughout 2021. The peak is much more elevated in the scenarios that show greater stress: an almost 75-basis point increase at peak for baseline, and a greater than five times or almost 200-basis point increase for downside. Loss rates partially recover by the end of 2021 but remain at an elevated level as in the upside scenario but are still higher. It is worth noting that despite the massive increase, even the worst forecasts do not have loss rates as large as those of the Great Recession. This is expected, as the Great Recession was characterized by a collapse in the mortgage market, partially caused by incredibly lax lending standards.

<sup>2</sup> In general, these actions minimized losses related to natural disasters. In cases such as Hurricanes Irma and Harvey, the average borrower in Florida, Louisiana, and Texas registered little change in losses compared to national trends.

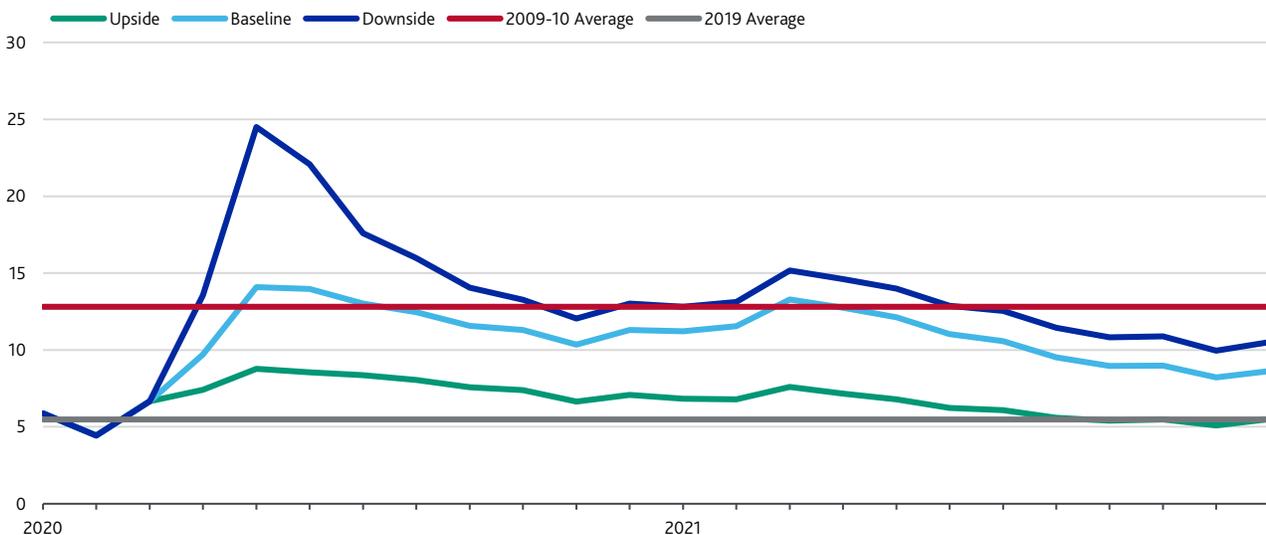
Figure 6 Gross loss rates, first mortgage, annualized, percent



Source: CreditForecast.com, Moody's Analytics

Turning to the bank card segment, expected gross loss rates are plotted in Figure 7. Note the scale: loss rates are typically an order of magnitude larger for bank card than they are for the mortgage sector. Given this, the proportional increase under each scenario is similar to that of mortgage, nearly double the recent historical low for upside, triple for baseline, and five times higher for downside. Rates remain elevated for several months, but the return to the 2019 average happens sooner than for mortgage. Though our upside forecast remains more optimistic than the experience during the Great Recession, our baseline scenario is very similar and our downside scenario peaks at a much higher level. Depending on upcoming data releases and the path of the pandemic, we would not be surprised if this scenario occurs.

Figure 7 Gross loss rates, bank card, annualized, percent

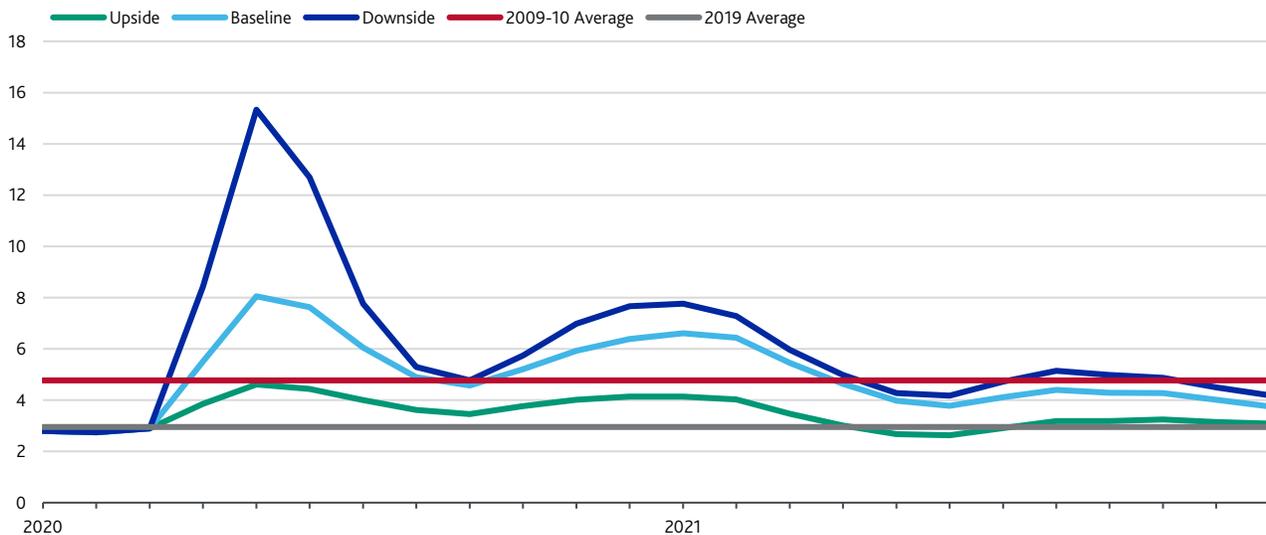


Source: CreditForecast.com, Moody's Analytics

The story in Figure 8 is even more dire. At the outset of this recession, gross loss rates were around 3%. Even under the upside scenario the peak rate climbs to the Great Recession average, an increase of 180 basis points. Under baseline and downside, each peak is well over the Great Recession average, climbing to 8% and 15% respectively. Rates do return to more normal levels relatively quickly under all scenarios, though there is a second peak toward the end of 2021 due to the waning effects of the stimulus and partly from seasonality. The increase in losses largely reflects loosening standards in this segment, as portfolios have grown through increased lending to subprime borrowers and terms have increased over the last five years or so.

Of the consumer credit forecasts discussed so far, auto loans have perhaps the most uncertainty. This is due to two factors. First, recent lending in this segment has been consistently lax but has not been tested by any stressful events. (As previously mentioned, the average credit score for auto loans has increased but less than most asset classes; only the bank card and retail card segments have improved less.) Second, it is unclear how used auto prices will evolve over the next year: low oil prices will boost demand for less-fuel-efficient cars (which tend to be older) but falling incomes will undercut demand for all cars. These prices are an important determinant of default behavior, and thus industry gross loss rates. Moody's Analytics forecasts call for a severe decline in prices, which drives the increase in loss rates. If prices do not drop so severely, losses will be commensurately lower as well.

**Figure 8** Gross loss rates, auto loans and leases, annualized, percent



Source: CreditForecast.com, Moody's Analytics

Expanding our discussion to include all asset classes, we present the lifetime loss rates for 13 segments of consumer credit in Table 2. Almost all sectors show an increase in loss rates with the lowest, first mortgage, increasing by just over 15% and the highest, auto bank lease, increasing by over 70%. The decrease in student loan losses is an artifact of new originations that are not expected to default for some time.

Table 2 Lifetime loss rate, various scenarios, percent

PORTFOLIO	JANUARY 1, 2020			MARCH 31, 2020		
	BASELINE	S1	S3	BASELINE	S1	S3
Auto Bank Lease	0.29	0.27	0.44	0.50	0.42	0.91
Auto Bank Loan	1.38	1.29	1.97	2.06	1.84	3.40
Auto Finance Lease	0.48	0.46	0.64	0.69	0.62	1.05
Auto Finance Loan	3.92	3.77	4.84	4.90	4.57	6.55
Bank Card	5.40	5.17	6.93	8.07	7.53	11.62
Consumer Finance Installment	5.98	5.87	6.59	7.30	7.11	8.22
Consumer Finance Revolving	9.66	9.24	12.39	12.16	11.38	16.82
First Mortgage	0.94	0.87	1.13	1.10	1.02	1.47
HELOAN	2.65	2.52	3.28	3.29	3.09	4.30
HELOC	1.66	1.50	2.72	2.55	2.27	4.47
Other	2.40	2.29	3.39	3.42	3.17	5.32
Retail Card	10.27	10.06	12.38	13.36	12.77	17.70
Student Loan	9.10	8.85	9.80	8.86	8.60	9.67

Note: Forecasts are generated as of January 1, 2020 and March 31, 2020 (the March Mid-cycle Update). Bank card and retail card losses do not account for future draws.

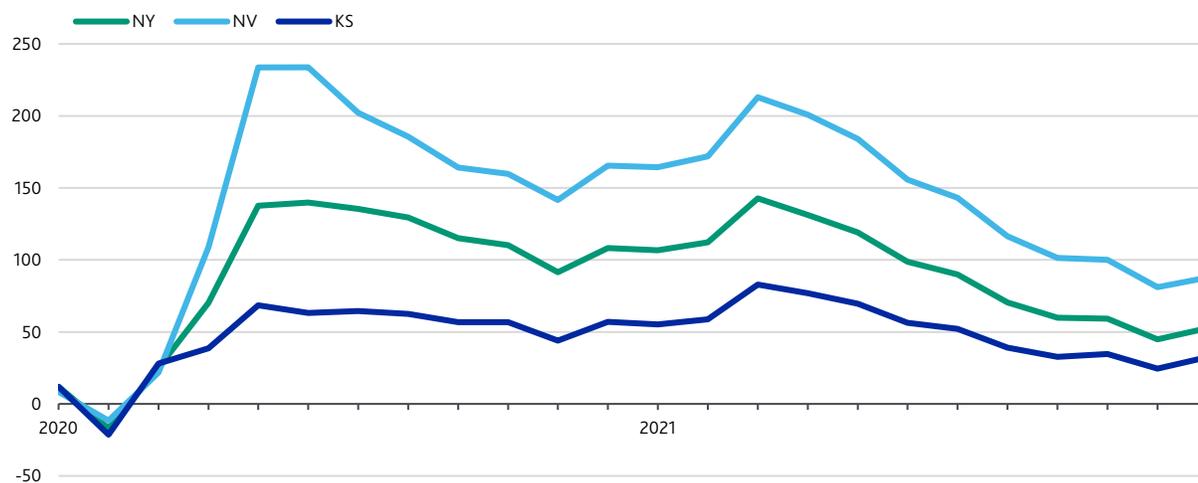
Source: CreditForecast.com, Moody's Analytics

### Regional differences in performance

While we understand how different asset classes will fare broadly, the impact varies across different states and metro areas. Our state-level forecasts account for regional differences that depend on a combination of (1) demographic and epidemiological factors and (2) economic considerations.<sup>3</sup> The first group captures factors including direct exposure to virus, demographics, and global interconnectedness; the second group captures factors related to tourism, finance, and commodities.

This analysis and our forecasts suggest that we will see the largest economic impact in large, coastal areas, particularly in the Northeast and popular tourist destinations. These are economies that are globally connected, densely populated, and wealthy. More sparsely populated areas with fewer links to the global economy are better positioned to weather the storm.

Figure 9 Gross loss rates, baseline scenario increase over 2019 average, bank card, various states, percent



Note: Values are the percent increase relative to the 2019 state-level average.

Source: CreditForecast.com, Moody's Analytics

<sup>3</sup> "Assessing the Regional Economic Impact of COVID-19." Adam Kamins, April 2019. Regional Financial Review.

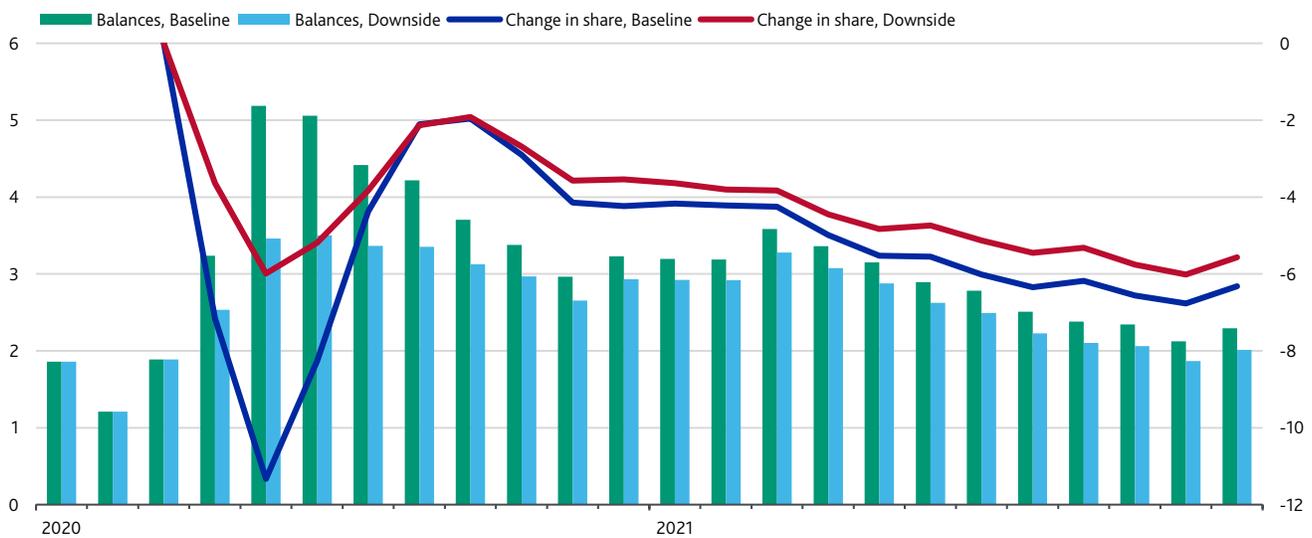
In Figure 9, we see a large increase in gross loss rates for the bank card segment in New York (NY) and Nevada (NV). For the baseline scenario, the peak loss rate doubles and is elevated throughout 2021 relative to the 2019 average. Loss rates partially recover by the end of 2021 but remain elevated. NY borrowers will show signs of significantly higher distress when losses increase by a factor of 1.5. At the other end of the spectrum, Kansas (KS) sees losses increase but to a much smaller extent. Further, by the end of 2021, loss rates are almost back to their pre-virus levels.

### How do subprime borrowers fare?

Businesses in the retail and service segments, such as restaurants, have been hit hardest by social distancing measures, resulting in large-scale layoffs in these sectors. These tend to be lower-income jobs, so they are usually held by subprime borrowers. Because this work is hourly, these workers typically have a weaker attachment to the labor market. Consequently, we can expect the rise in defaults to be concentrated among subprime borrowers as economic stress caused by the recession will disproportionately affect them.

Figure 10 shows default balances under the baseline and downside scenarios, along with the change in share since March 2020 (the last historical observation), both for subprime borrowers (at origination). Default balances increase and then peak in the second quarter before gradually declining over the next 18 months, interrupted briefly in March 2021 as the effects of the stimulus wear off. For the downside scenario, the increase results in a higher peak by roughly \$1.5 billion in May relative to baseline. Under both scenarios, default balances eventually return to their early-2020 levels of \$1-2 billion.

Figure 10 Subprime default balances (left, billions) and change in share of total (right, percentage points), bank card



Source: CreditForecast.com, Moody's Analytics

Interestingly, the subprime share of total default balances is forecasted to decline over this entire period. Starting at 45% in March, it declines six percentage points to peak stress under the baseline scenario, and 11 percentage points under downside. After 24 months, the decline is about six percentage points for both. Prime borrowers typically show higher sensitivity to declining job market conditions, primarily due to their higher average debt levels and the fact that they are now experiencing job loss when they might have not seen any during a benign economy. As the economy declines and employment decreases, fewer prime borrowers can make their debt payments. Because they carry higher balances, when defaults in this segment occur, the loss per default is higher. A secondary factor is that when defaults pick up, lending tends to slow most drastically to subprime borrowers, and so future defaults by total volume in subprime are also low.

## Conclusion

The most likely path for consumer credit is one where losses are less severe than the unemployment rate would suggest, characterized by a slower increase and more gradual decline. This is due to both the strength of household finances entering the recession and the assistance that will be offered in many forms from both the government and lenders. In fact, this has already begun with the Fed offering substantial lending facilities and lowering their target interest rate to its floor of zero percent, and the federal government approving an unprecedented fiscal stimulus package, while discussions of further spending ramp up. Additionally, lenders will offer their own form of relief such as payment deferment to minimize losses during these stressful times. Despite these efforts, both delinquencies and losses will increase substantially.<sup>4</sup>

The generosity of lender-led programs is a big unknown as this recession proceeds. If deferment and interest forgiveness are wide-reaching and immediate, we may not see much of an increase in losses in the second quarter, as missed payments would not begin to accumulate until the assistance ran out, and serious delinquencies would follow a few months after that. If instead the assistance starts slowly or ends before the worst of the recession, the increase in losses could start immediately. It is therefore important that lenders act with conviction if they want to stem the tide. In the absence of specific details about these programs, we have omitted their impact in our preceding empirical analysis.

While we broadly project credit to fare better than it did in the financial crisis, there is substantial downside risk. Government and lender assistance can only go so far. Losses can only be prolonged so long if the economy does not recover because servicers cannot bear the costs of payment assistance indefinitely. If borrowers lose too much income and credit wells dry up, even the most established borrowers can become delinquent. Additionally, house prices will eventually plummet if a wave of foreclosures is on the horizon, leading to an even more dire outcome than the one outlined here.

## Further Reading

- » Staggering surge in unemployment likely to be temporary. April 2020. Moody's Investors Service. [https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC\\_1223252](https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1223252)
- » Coronavirus stimulus will lessen economic pain, but credit climate will remain difficult. April 2020. Moody's Investors Service. [https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC\\_1222618](https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1222618)
- » Global economic forecast update (Webinar). March 2020. Moody's Analytics. <https://www.moodyanalytics.com/webinars-on-demand/2020/global-economic-forecast-update?cid=B85CNZHQ8BT4675>
- » COVID-19: global recession Q&A. March 2020. Moody's Analytics. <https://www.moodyanalytics.com/-/media/article/2020/covid-webinar-qa-0320.pdf>
- » Reopening Main Street. April 2020. Moody's Analytics. <https://www.moodyanalytics.com/articles/2020/reopening-main-street>
- » What the stimulus can do. March 2020. Moody's Analytics. <https://www.moodyanalytics.com/-/media/article/2020/what-the-coronavirus-stimulus-can-do.pdf>

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<sup>4</sup> It is also important to note that some lenders will not make payment accommodations. The lack of payment assistance disproportionately hits borrowers with the least chance of recovery: individuals who were already delinquent, borrowing unsecured debt at higher interest rates, or from lenders less concerned about reputational costs or who are liquidity constrained.

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