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CECL Benchmark Q4 2020

A framework to understand the extent of your allowance build (updated for Q4)

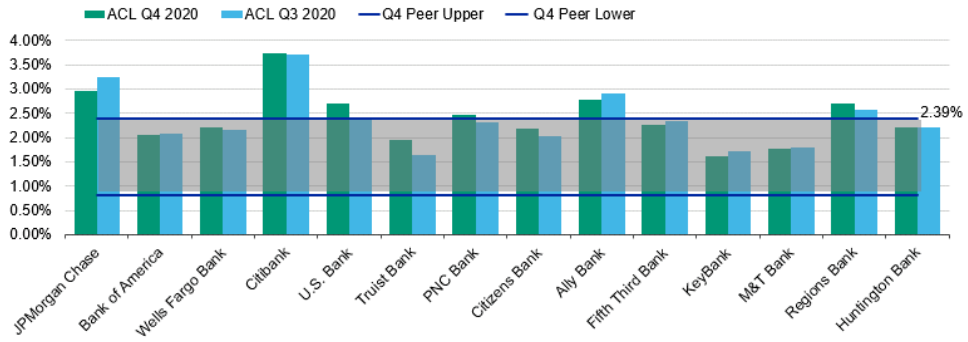
In this paper, we continue the research analysis that was performed throughout the past year. Over the course of four quarters, we have been able to confirm that the methodology used can be a stable triangulation indicator on the allowance for a peer group of banks. In the analysis, we look at Q3 actual results to update the triangulation ranges for each bank and the peer group. This lets us establish a point of view on whether banks will keep building, maintain, or start releasing allowance into Q4 and where they stand on the range of preparedness compared to peers in the context of an evolving economic outlook.

This quarter's analysis continues to provide updates on some specific methodologies to address questions from readers. In addition, the analysis was further expanded to include a differentiation by product type. By further breaking down our analysis into this greater detail, we can provide readers with significantly more insightful results.

We observed that the peer group weighted average allowance for credit loss (ACL) for Q3 2020 is 2.54%. Going into Q4 2020, we establish that our new upper- and lower-bound indexes for the peer group are respectively 2.39% and 0.81%. As anticipated, the movement in this quarter's upper and lower bounds indicated a drop in both metrics given the continued improvement in economic variables. Figure 1 presents each bank's own upper and lower bound, as well as the Q3 actual reserve ratios.

Despite that, between Q3 2020 and Q4 2020 economic forecasts have continued to improve there still remains a significant amount of uncertainty on the near-term impact of the pandemic, as well as the political changes. As a result, despite the drop in the benchmark results we expect most banks to maintain a stable allowance as net charge-offs (NCOs) begin to materialize with the potential for some relatively small, insignificant release of reserves. The most difficult aspect of knowing whether reserves are sufficient continues to depend on the timing of charge-offs, government stimulus, and forbearance actions that may likely delay the typical onset of losses. Consistent with the previous studies, we provide peer group and bank-specific commentary.

Figure 1 Banks' own upper- and lower-bound indexes



Source: Moody's Analytics and FDIC Call Report data

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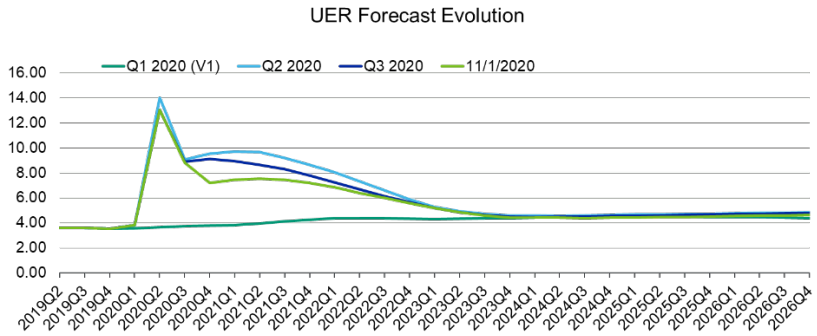
Introduction

Our benchmark analysis began March 31, 2020 and has continued through Q2 and Q3 of 2020. Within each of the previous studies, we concluded that banks would continue to build their allowance as the economic impacts of the pandemic unfolded. As we move to the final quarter of 2020 and into 2021, the question will shift slightly to whether the time has come to begin releasing the reserves that were built up over the past few quarters. This will be the focus as we update the analysis for the latest Q3 actuals and the new 11/30/2020 economic forecast to update the range for our Q4 predictions.

In addition to reviewing these trends for our portfolio level upper- and lower-bound summaries, for this quarter we will also be presenting our analysis at an asset-type level. This will provide additional insight into the changes we are seeing in the industry and offer a better benchmark for how this portfolio mix will affect the way the overall summary analysis has looked. For example, a bank with a significant commercial portfolio may be more apt to hold onto its current reserve level when compared to a bank holding a larger residential mortgage portfolio.

Overall, the key scenario changes in this quarter included a leveling or strengthening of many of the variables that had been so volatile the past few quarters, as shown in Figure 2. Based upon this overall effect, we observe that the both the upper and lower bounds decreased. The peer group average for the lower bound is 0.81% and the upper-bound average was 2.39%, compared to 1.92% and 3.26% from the prior quarter's analysis.

Figure 2 Scenario evolution from Q1 2020 to November 2020 – unemployment rates



Source: Moody's Analytics

For a summary review of the methodology used to generate this benchmark study, see our original whitepaper.[1] In this paper, we break down the overall results of our benchmark study at a portfolio level and based on asset type. Then, we will review each bank's Q3 results and where those stand compared to our triangulation index. Based on the economic condition assumptions for Q4 (which have continued to show improvement since September), we will give commentary on what we expect of the banks in the peer group—which ones will build, maintain, or release allowance.

Comparison of results – portfolio averages

The intent of the updated study is to help gauge what the Q4 reserves level will be. For the past several quarters, a big part of that analysis was a determination of whether some banks were still behind in building reserves for the fallout of the pandemic. However, as we have seen a stabilization in the economy and economic variables continuing to show signs of strengthening, the focus now shifts to overall levels of the reserve. For example, some banks may still appear under-reserved while others appear to be capable of releasing some of the reserve they built over the past three quarters. It is this change in mindset, from overall building of reserves across the board to a more nuanced balancing, that drove the change to further the benchmark to an asset-class level.

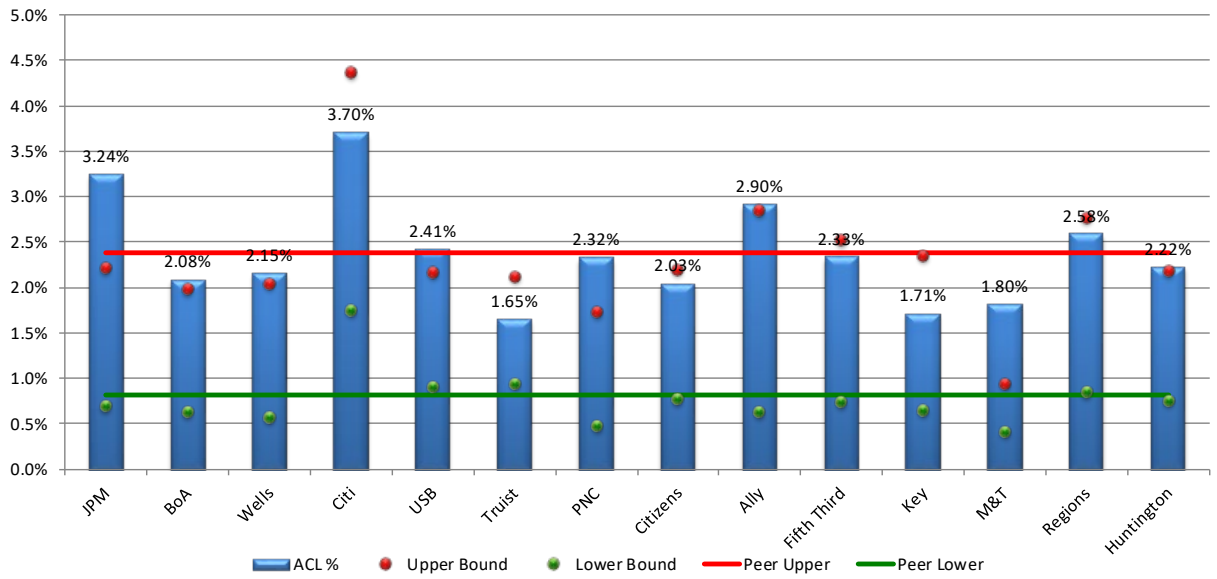
That said, before providing results at an asset-class level, we review the portfolio-level results, particularly as a comparison to our prior benchmark studies. Upon review of the results (Figure 3), we can see that almost all banks within this study fell near or in some cases above their upper bounds per the analysis. Even those that were not at this level were significantly distanced from any lower bounds at an individual or peer level. This has shifted from earlier quarters where in Q2 and Q3 estimates tended to fall

[1] "CECL Build – Is it Enough?" https://www.moodysanalytics.com/-/media/article/2020/cecl%20build%20-%20is%20it%20enough.pdf

directly within the established range for each bank, and is in opposition to Q1, when our analysis showed several banks to appear under-reserved.

As evidence of this, prior analysis left a few banks near or below the peer group lower bounds. However, in the Q4 study there were no banks in that position. Based on the overall analysis, it would appear that being over-reserved heading into the new year is a larger concern. However, this is where the asset type analysis will be crucial as the following results will showcase how this differs based on class—and the continued uncertainty in some markets continues to make these reserve cushions seem reasonable.

Figure 3 Triangulation of ACL estimates



Source: Moody's Analytics and FDIC Call Report data

Figure 4 presents the details of our overall analysis, as well as the percentage increase above the peer group lower bound. We will base most of our commentary on this data and investors' conference commentary provided by each bank.

Figure 4 Top 14 banks – upper- and lower-bound bank-specific range[2] estimates Q1 2020 versus Q2 2020

Name	ACL Q2 %	ACL Q3 %	Q2 to Q3 % change	Upper Bound	Mid-Point	Lower Bound	% Lower Bound
JPM	3.31%	3.24%	-2.12%	2.21%	1.45%	0.70%	362.69%
BoA	1.97%	2.08%	5.34%	1.99%	1.31%	0.63%	228.79%
Wells	2.06%	2.15%	4.39%	2.04%	1.30%	0.57%	279.08%
Citi	3.66%	3.70%	1.20%	4.37%	3.06%	1.75%	111.96%
USB	2.38%	2.41%	1.41%	2.16%	1.53%	0.91%	166.40%
Truist	1.55%	1.65%	6.11%	2.12%	1.53%	0.94%	74.65%
PNC	2.30%	2.32%	0.63%	1.74%	1.11%	0.48%	386.32%
Citizens	1.94%	2.03%	5.00%	2.20%	1.49%	0.77%	163.60%
Ally	2.88%	2.90%	0.90%	2.85%	1.74%	0.64%	356.31%
Fifth Third	2.35%	2.33%	-0.78%	2.53%	1.63%	0.74%	214.66%
Key	1.64%	1.71%	4.24%	2.35%	1.50%	0.65%	161.46%
M&T	1.69%	1.80%	6.82%	0.95%	0.68%	0.42%	333.43%
Regions	2.51%	2.58%	2.48%	2.78%	1.81%	0.85%	202.72%
Huntington	2.13%	2.22%	4.23%	2.18%	1.46%	0.75%	196.27%

Source: Moody's Analytics and FDIC call report data

[2] Note: the upper and lower bound were estimated based on Q2 call report data.

Heading into the Q4 results period and progressing into 2021 the big question remains from Q3: will banks release reserves and if so, when? Based on our triangulation index and the improving economic forecast, it would appear that reserve releases are upcoming but will not occur in any material manner in Q4. Additionally, with the continued uncertainty around the epidemiology of the pandemic and related vaccination efforts and the delayed onset of losses by continued government support actions, it seems most of the banks in our peer group will not be in a position to release reserves until later in 2021. As mentioned in our prior study, we do expect to see shifts within certain banks' portfolios, with some asset classes having releases (for example, mortgages) and others increases (commercial real estate [CRE]), leading to an overall maintenance of the current level of allowances. As previously mentioned, for this reason in this quarter and moving forward we have expanded our analysis to include a view based on asset type.

Comparison of results – results per asset type

In each of the following sections, we will present the peer group upper and lower bound graphed against each bank's Q3 ACL reserves, and then we will show the Q2 to Q3 changes as well as the bank's own upper and lower bound. In addition, we will illustrate the dispersion of the results, by bank, that were used to create the benchmark. The gist is that the more disperse the results for a given bank, the more volatile the portfolio performance will tend to have been over time. Finally, we will present a view of the peer group indicators by bank to help the reader understand where the bank stands among its peer group in terms of riskiness profile. For each product segment, we offer summary commentary for the banks within their peer group based on the Q4 earnings release information.

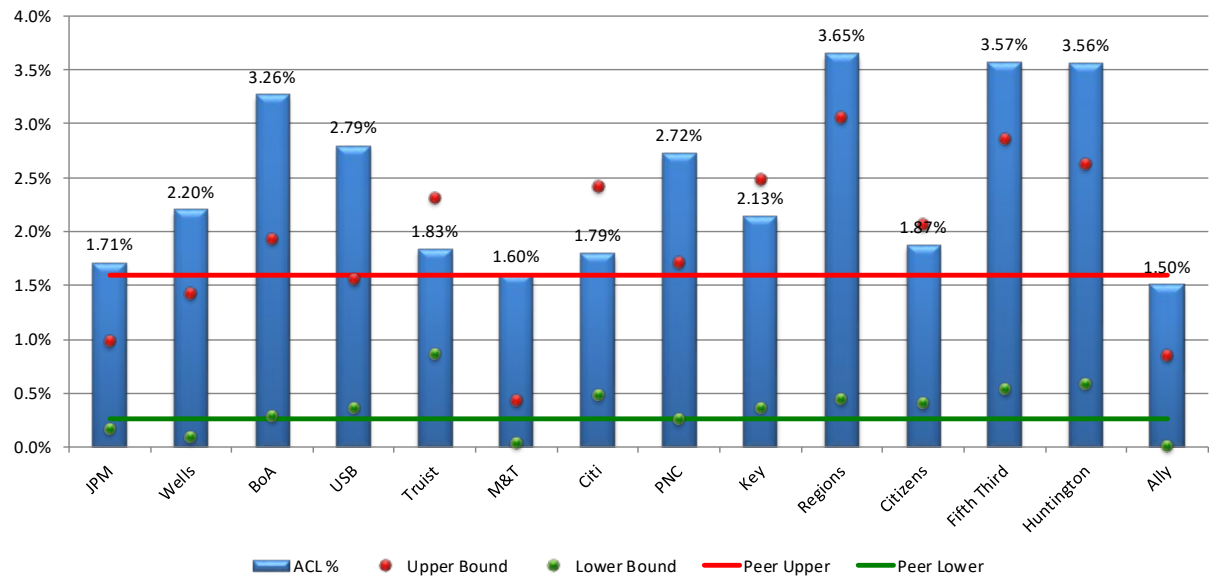
Commercial real estate

The CRE portfolio has garnered the most attention since the beginning of the COVID-19 pandemic. Business closures, empty offices, and hotels shutdowns have made these portfolios susceptible to increased credit deterioration. On the other hand, some property types and locations have fared relatively well, and the government has provided much-needed support that trickles down to the net operating income of CRE properties.

Figure 5 presents the peer group's current ACL reserve ratio for Q3 2020 (blue bars), as well as the peer group upper and lower bound (red and green lines) and the bank's own upper and lower bound (red and green dots). We observe that most banks sit above the upper bound and expected releases for most in Q4.

The peer group's upper and lower bounds are 1.59% and 0.25%, respectively. The much-improved economic conditions (as of November 2020) have lowered the boundaries from the previous quarter while banks have been maintaining reserves at more conservative levels given the still uncertain but more positive economic outlook.

Figure 5 Q3 peer benchmark for CRE portfolio



Source: Moody's Analytics and FDIC Call Report data

Figure 6 shows the evolution of each bank's reserves from Q2 to Q3 as well as their own upper- and lower-bound values. The final % Lower Bound column represents how far above the lower bound the Q3 2020 ratio is. The results in the table show that ACL increases were prevalent across all banks in Q3 while the benchmark itself—which uses the November 2020 forecast—is showing expected improvements. This should lead to the conclusion that banks are well reserved and that eventually some releases may come through, but we do not expect any large releases in CRE portfolios for Q4.

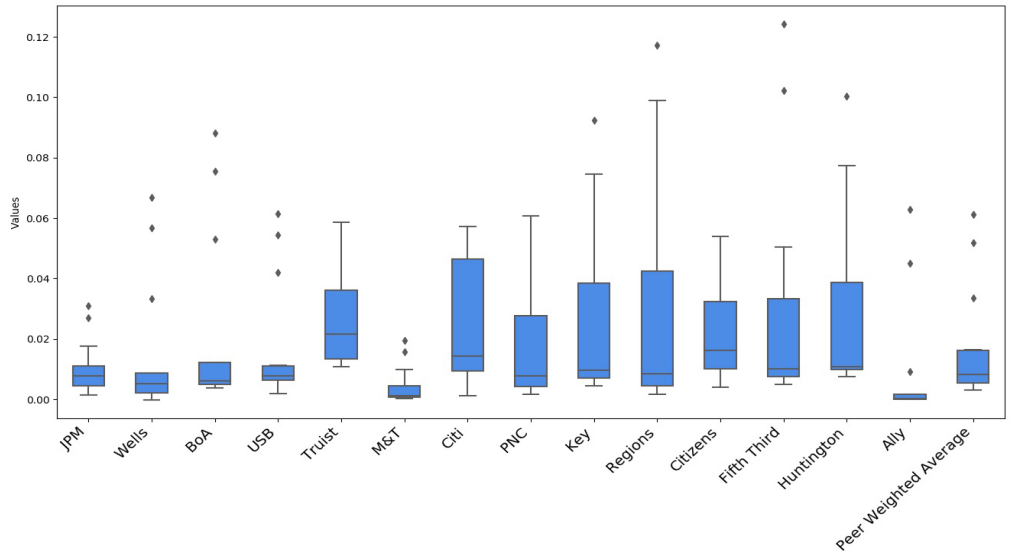
Figure 6 ACL metrics for peer group – CRE

Bank Name	ACL Q2 %	ACL Q3 %	Q2 to Q3 % change	Upper Bound	Mid-Point	Lower Bound	% Lower Bound
JPM	1.46%	1.71%	17.02%	0.98%	0.57%	0.17%	903.36%
Wells	2.04%	2.20%	7.64%	1.42%	0.76%	0.10%	2132.23%
BoA	3.60%	3.26%	-9.33%	1.94%	1.12%	0.30%	1005.52%
USB	2.59%	2.79%	7.64%	1.56%	0.96%	0.37%	655.16%
Truist	1.40%	1.83%	30.67%	2.31%	1.59%	0.86%	111.77%
M&T	1.26%	1.60%	27.11%	0.43%	0.24%	0.05%	3382.32%
Citi	1.76%	1.79%	1.47%	2.42%	1.45%	0.48%	268.93%
PNC	1.41%	2.72%	92.23%	1.72%	0.99%	0.27%	908.07%
Key	2.17%	2.13%	-1.58%	2.48%	1.43%	0.37%	474.59%
Regions	3.44%	3.65%	6.15%	3.06%	1.75%	0.45%	709.30%
Citizens	0.59%	1.87%	215.68%	2.06%	1.24%	0.41%	355.05%
Fifth Third	3.46%	3.57%	3.10%	2.86%	1.70%	0.53%	567.91%
Huntington	2.91%	3.56%	22.30%	2.63%	1.61%	0.59%	504.78%
Ally	1.57%	1.50%	-4.46%	0.85%	0.43%	0.01%	16302.03%

Source: Moody's Analytics and FDIC Call Report data

Figure 7 gives a sense of the dispersion of the metrics that were used in building the benchmark. Such information can be used to interpret which banks may be exposed to more or less volatility. The tighter range of results means that for all of the different metrics computed that are part of the benchmark, some have a much smaller range of sensitivity (we use different models but also different scenarios), leading us to interpret that banks with small ranges should have less volatile reserves over time. CRE is a case in point; for example, we observe that JP Morgan Chase and M&T Bank have a very tight range of metrics and their outliers are not too far off from the box plot when compared to their peers.

Figure 7 Benchmark individual metrics dispersion – CRE



Source: Moody's Analytics and FDIC Call Report data

Figure 8 shows the riskiness indicators for the CRE portfolio in terms of maximum and average NCO experienced during the last financial crisis, and ACL coverage in quarters for each compared to their peers. Note that green is better than average.

Figure 8 Riskiness indicators relative to peers – CRE

Bank Name	ACL %	NCO % max	NCO % avg	NCO max coverage quarters	NCO avg coverage quarters
JPM	1.71%	0.47%	0.13%	3.59	13.24
Wells	2.20%	0.27%	0.09%	8.15	24.10
BoA	3.26%	0.42%	0.09%	7.82	37.62
USB	2.79%	0.39%	0.10%	7.15	27.00
Truist	1.83%	0.76%	0.15%	2.40	12.04
M&T	1.60%	0.26%	0.05%	6.18	29.60
Citi	1.79%	1.90%	0.32%	0.94	5.58
PNC	2.72%	1.07%	0.28%	2.55	9.69
Key	2.13%	1.58%	0.46%	1.35	4.68
Regions	3.65%	0.94%	0.42%	3.90	8.67
Citizens	1.87%	1.07%	0.39%	1.74	4.81
Fifth Third	3.57%	2.28%	0.51%	1.57	7.03
Huntington	3.56%	1.73%	0.46%	2.06	7.70
Ally	1.50%	0.16%	0.01%	9.54	152.71
Peer Weighted Average	2.28%	0.63%	0.16%	3.65	14.12

Source: Moody's Analytics and FDIC Call Report data

This information can be used alongside the benchmark and idiosyncratic knowledge of the portfolio evolution over time to determine whether a given bank is better reserved than a given peer.

We review JP Morgan Chase using information from its last earnings report to establish a view on its level of allowances as of Q4 2020, and provide some information on what to expect going into Q1 2021 based on our benchmark.

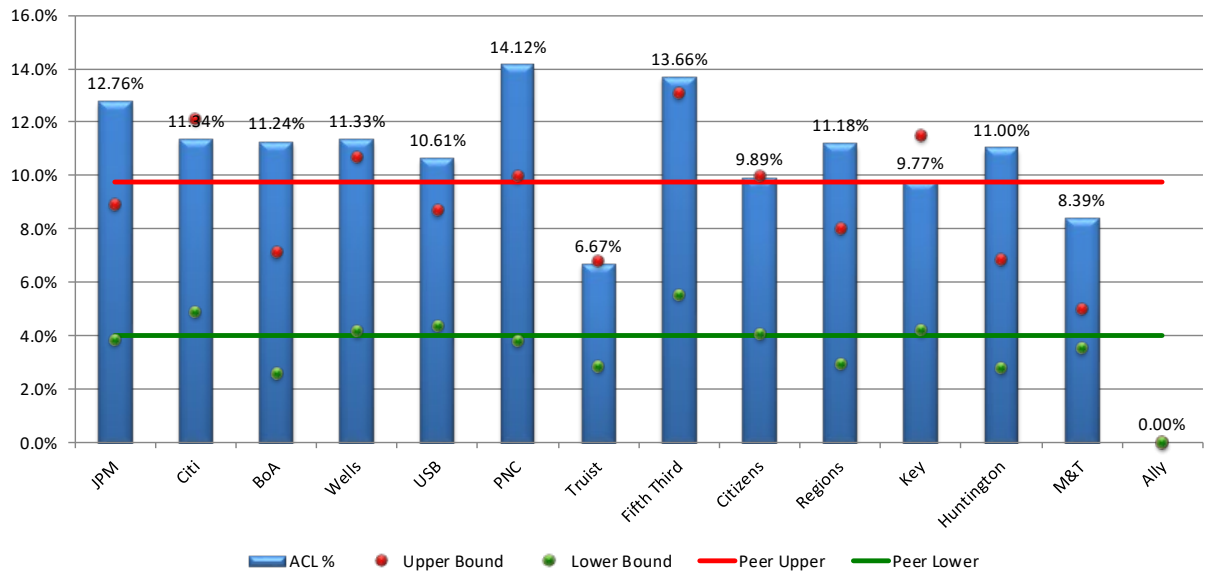
JP Morgan Chase saw its CRE loan portfolio grow by 2% year over year and reserves for the commercial portfolio (CRE breakout is not available) as a whole were down by $2 billion, signaling that the improved economic environment (although uncertain) was good enough to lead to releases. Our benchmark concurs with JP Morgan Chase, which sat at 1.71% as of Q3 2020 and is likely to be somewhat lower as call report data becomes available. The upper-bound benchmark at 1.59% provides room for lowering reserves of that magnitude and will remain very close to being on par with some of the best-reserved banks in the peer group for the CRE portfolio. As of the latest Q4 report, JP Morgan Chase now sat at 1.47% for the CRE portfolio while seeing balances decline by 1.3%, signaling more aggressive releases are in store. JP Morgan Chase now sits just below our upper-bound benchmark.

Credit cards

The credit card portfolio is one where reserves were hiked very early on in the pandemic when we saw unemployment and job losses skyrocket. Because they are unsecured, credit cards usually experience much higher levels of defaults—and we observed a reserve build commensurate with that expected behavior.

Figure 9 illustrates the peer group's current ACL reserve ratio for Q3 2020 (blue bars), as well as the peer group's upper and lower bound (red and green lines) and the bank's own upper and lower bound (red and green dots). The peer group's upper and lower bounds are 9.79% and 3.99%, respectively, as opposed to CRE. The much-improved economic conditions (as of November 2020) have lowered the boundaries but to a lesser extent, while banks have been maintaining reserves at more conservative levels given the still uncertain but more positive economic outlook. Most banks find themselves at or above the peer group and their own upper bound except Truist Bank, which is quite a bit lower than the peer group average but near the top of its own upper bound.

Figure 9 Q3 peer benchmark for credit card portfolio



Source: Moody's Analytics and FDIC Call Report data

Figure 10 presents how each bank's reserves have evolved from Q2 to Q3 and their own upper- and lower-bound values. The final % Lower Bound column represents how far above the lower bound the Q3 2020 ratio is. The results in the table show that ACL increases were prevalent for all banks but five in Q3. All banks that have released reserves still sit above their upper bound except Key Bank, which is releasing the most aggressively for the cards portfolio but still has reserved for more than twice its own lower bound. With the economic outlook improving, we expect a more broad-based reduction in allowance for cards, especially as the new COVID-19 stimulus bill takes effect and provides much-needed income support.

Figure 10 ACL metrics for peer group – credit cards

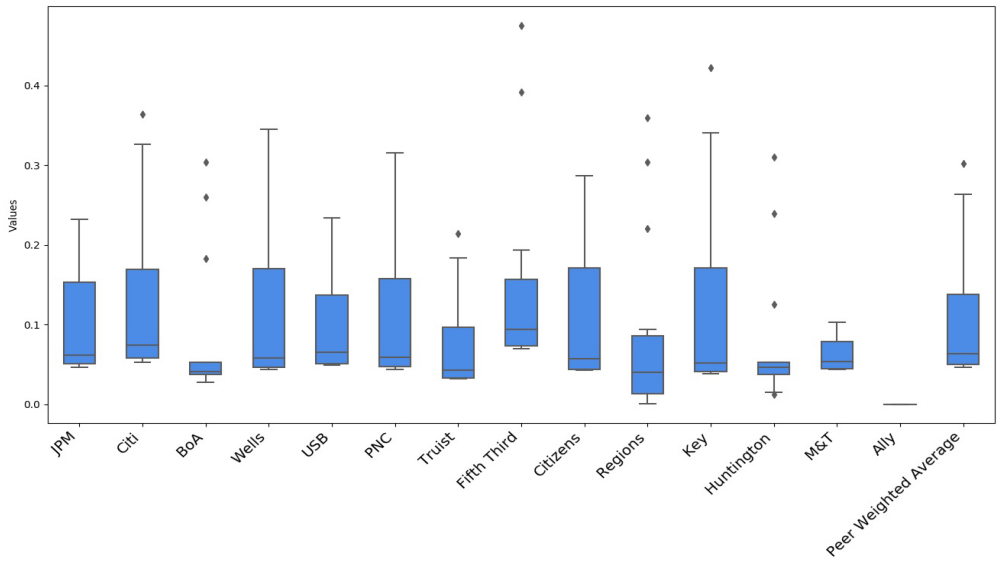
Bank Name	ACL Q2 %	ACL Q3 %	Q2 to Q3 % change	Upper Bound	Mid-Point	Lower Bound	% Lower Bound
JPM	12.58%	12.76%	1.47%	8.94%	6.39%	3.85%	231.44%
Citi	11.12%	11.34%	2.02%	12.13%	8.51%	4.90%	131.63%
BoA	10.98%	11.24%	2.39%	7.14%	4.85%	2.57%	337.82%
Wells	10.49%	11.33%	8.07%	10.71%	7.43%	4.15%	173.20%
USB	10.14%	10.61%	4.66%	8.72%	6.56%	4.40%	141.07%
PNC	15.32%	14.12%	-7.88%	9.96%	6.88%	3.80%	271.87%
Truist	6.73%	6.67%	-1.02%	6.79%	4.83%	2.88%	131.79%
Fifth Third	14.81%	13.66%	-7.74%	13.08%	9.32%	5.56%	145.72%
Citizens	7.37%	9.89%	34.15%	9.96%	7.00%	4.04%	144.62%
Regions	9.63%	11.18%	16.10%	8.04%	5.51%	2.97%	276.84%
Key	10.93%	9.77%	-10.57%	11.50%	7.87%	4.23%	130.80%
Huntington	10.46%	11.00%	5.15%	6.85%	4.82%	2.79%	294.81%
M&T	8.96%	8.39%	-6.36%	5.00%	4.27%	3.53%	137.33%
Ally	0.00%	0.00%		0.00%	0.00%	0.00%	

Source: Moody's Analytics and FDIC Call Report data

Figure 11 gives a sense of the dispersion of the metrics that were used in building the benchmark. Such information can be used to interpret which banks may be exposed to more or less volatility. The tighter range of results means that for all of the different metrics computed that are part of the benchmark, some have a much smaller range of sensitivity (we use different models but also different scenarios), leading us to interpret that banks with small ranges should have less-volatile reserves over time. Cards is a case in point; for example, we observe that JP Morgan Chase and Citigroup have a broad range of metrics (think riskier portfolios)

and their outliers are in the 20%-plus range. Our expectation is that those banks would sit well above the peer group average as a result, which they do.

Figure 11 Benchmark individual metrics dispersion – credit cards



Source: Moody's Analytics and FDIC Call Report data

Figure 12 shows the riskiness indicators for the card portfolio in terms of ACL coverage in quarters as well as the maximum and average NCO experienced during the last financial crisis compared to their peers. Here, staying with our two example banks (JP Morgan Chase and Citigroup), we observe that these two banks have riskiness indicators that are worse than average for the peer group, which could justify why they have some of the highest card reserves among the peer group. Note that green is better than peer average.

Figure 12 Riskiness indicators relative to peers – credit cards

Bank Name	ACL %	NCO % max	NCO % avg	NCO max coverage quarters	NCO avg coverage quarters
JPM	12.76%	4.41%	1.96%	2.90	6.53
Citi	11.34%	3.25%	1.75%	3.49	6.48
BoA	11.24%	1.36%	0.08%	8.27	132.26
Wells	11.33%	3.04%	1.98%	3.73	5.72
USB	10.61%	1.92%	1.36%	5.53	7.83
PNC	14.12%	2.68%	1.42%	5.28	9.95
Truist	6.67%	2.31%	1.13%	2.88	5.88
Fifth Third	13.66%	2.38%	1.63%	5.73	8.37
Citizens	9.89%	4.95%	1.89%	2.00	5.23
Regions	11.18%				
Key	9.77%	5.23%	1.62%	1.87	6.04
Huntington	11.00%	2.24%	-39.06%	4.91	(0.28)
M&T	8.39%	2.31%	1.11%	3.63	7.55
Ally	0.00%				
Peer Weighted Average	11.69%	3.12%	1.47%	3.75	7.96

Source: Moody's Analytics and FDIC Call Report data

This information can be used alongside the benchmark and idiosyncratic knowledge of the portfolio evolution over time to determine whether a given bank is better reserved than a given peer.

We review Citigroup using information from its last earnings report to establish a view on its level of allowances as of Q4 2020, and provide information on what to expect going into Q1 2021 based on our benchmark.

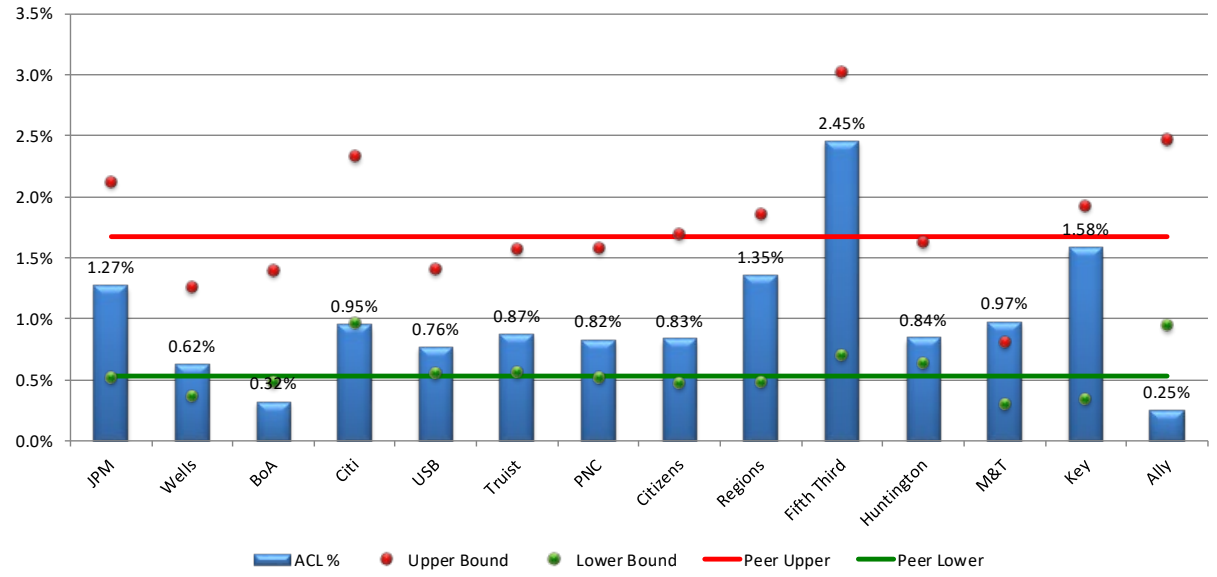
Citigroup saw retail loan balances shrink by 6.6% year over year, and reserves for the credit card portfolio as a whole were down slightly by $100 million in Q4 2020. This indicates that the better economic environment, although uncertain, led to very timid releases given the likely size of the drop in balances for Q4 2020. Our benchmark concurs with Citigroup, which sat at 11.34% as of Q3 2020 and decreased to 10.98% as of Q4 2020. It is likely to continue to slowly release reserves as economic conditions improve and government support increases over the next quarter. The bank's own upper-bound benchmark at 12.13% is slightly higher than peers based on Citigroup's historical experience—but Citigroup still remains well above the peer group upper bound at 9.79%. As of the latest call report data, Citigroup released reserve for cards to 10.82%, which is still well above the peer group upper bound, while balances grew by 4%. This signals more aggressive reserves release for this quarter and will likely continue into Q1.

Mortgage

Contrary to the credit card portfolio analysis given above, residential mortgages has been a portfolio where reserves remained relatively low throughout the pandemic. Despite unemployment spikes and significant job losses that remain at heightened levels even now, other factors have remained steady, leaving this industry without the loss projections others have seen. In particular, strong, consistent house prices and house price projections have kept this market stable in terms of loss projections. In addition, various government and regulatory initiatives have helped leave delinquency and default levels for this market very low.

Figure 13 depicts the peer group's current ACL reserve ratio for Q3 2020 (blue bars), as well as the peer group upper and lower bound (red and green lines) and the bank's own upper and lower bound (red and green dots). The peer group's upper and lower bounds are 1.67% and 0.53%, respectively, which is significantly lower than the other consumer loan portfolios (that is, credit cards and other). As a result, most banks in this study find themselves squarely in the middle of their individual upper and lower bounds, with only Bank of America and Ally Bank below the lower bounds of our analysis and only M&T Bank above its respective upper bound. In addition, only Bank of America and Ally Bank find themselves below their peer group's lower bound and Fifth Third Bank above the peer group's upper bound.

Figure 13 Q3 peer benchmark for residential mortgage portfolios



Source: Moody's Analytics and FDIC Call Report data

Figure 14 shows how each bank's reserves have evolved from Q2 to Q3, as well as their own upper- and lower-bound values. The final % Lower Bound column represents how far above the lower bound the Q3 2020 ratio is. The results in the table show that ACL changes were slight for all banks as they relate to the residential mortgage portfolio. PNC Bank and US Bank represented the

largest release of reserves for this loan type, but again those changes were minimal given both had a less than 1% reserve as a starting point. It is worth noting that both of the banks referenced earlier that were below their current lower bound added reserves in this quarter.

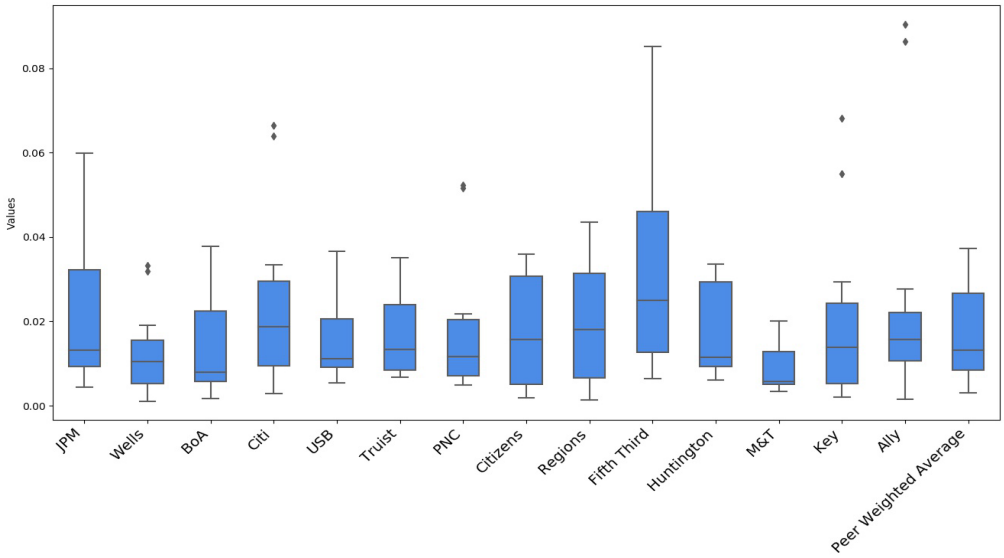
Figure 14 ACL metrics for peer group – mortgage

Bank Name	ACL Q2 %	ACL Q3 %	Q2 to Q3 % change	Upper Bound	Mid-Point	Lower Bound	% Lower Bound
JPM	1.35%	1.27%	-6.29%	2.12%	1.32%	0.52%	145.67%
Wells	0.64%	0.62%	-3.31%	1.25%	0.81%	0.37%	69.14%
BoA	0.30%	0.32%	5.31%	1.40%	0.94%	0.48%	-34.22%
Citi	1.01%	0.95%	-5.88%	2.33%	1.65%	0.97%	-2.64%
USB	0.89%	0.76%	-13.89%	1.40%	0.98%	0.56%	37.17%
Truist	0.87%	0.87%	0.60%	1.57%	1.07%	0.57%	53.98%
PNC	0.94%	0.82%	-12.35%	1.58%	1.05%	0.52%	57.39%
Citizens	0.71%	0.83%	16.69%	1.69%	1.08%	0.47%	74.40%
Regions	1.44%	1.35%	-5.80%	1.86%	1.18%	0.49%	175.51%
Fifth Third	2.66%	2.45%	-8.09%	3.02%	1.86%	0.70%	249.41%
Huntington	0.74%	0.84%	12.85%	1.62%	1.13%	0.63%	32.33%
M&T	1.04%	0.97%	-6.45%	0.81%	0.56%	0.30%	223.36%
Key	1.66%	1.58%	-5.18%	1.92%	1.14%	0.35%	349.74%
Ally	0.23%	0.25%	5.68%	2.47%	1.71%	0.94%	-73.69%

Source: Moody's Analytics and FDIC Call Report data

Figure 15 gives a sense of the dispersion of the metrics that were used in building the benchmark. Such information can be used to interpret which banks may be exposed to more or less volatility. The tighter range of results means that for all of the different metrics computed that are part of the benchmark, some have a much smaller range of sensitivity (we use different models but also different scenarios), leading us to interpret that banks with small ranges should have less-volatile reserves over time. A good example of this can be seen in the results of Fifth Third Bank, which has a significantly broader range in the residential mortgage space than its peers.

Figure 15 Benchmark individual metrics dispersion – mortgage



Source: Moody's Analytics and FDIC Call Report data

Figure 16 illustrates the riskiness indicators for the mortgage portfolio in terms of ACL coverage in quarters, as well as the maximum and average NCO experienced during the last financial crisis compared to their peers. Based on the results, there is a

consistent outcome in which both Bank of America and Ally Bank appear to have lower reserve levels and higher riskiness factors than their peers in this loan type. Note that green is better than peer average.

Figure 16 Riskiness indicators relative to peers – mortgage

Bank Name	ACL %	NCO % max	NCO % avg	NCO max coverage quarters	NCO avg coverage quarters
JPM	1.27%	0.83%	0.45%	1.52	2.83
Wells	0.62%	0.74%	0.32%	0.85	1.93
BoA	0.32%	0.82%	0.39%	0.39	0.82
Citi	0.95%	1.34%	0.72%	0.71	1.31
USB	0.76%	0.49%	0.25%	1.56	3.09
Truist	0.87%	0.76%	0.25%	1.15	3.55
PNC	0.82%	0.81%	0.19%	1.02	4.41
Citizens	0.83%	0.68%	0.36%	1.23	2.32
Regions	1.35%	0.65%	0.35%	2.08	3.88
Fifth Third	2.45%	1.47%	0.55%	1.66	4.48
Huntington	0.84%	1.03%	0.36%	0.81	2.31
M&T	0.97%	0.31%	0.18%	3.17	5.33
Key	1.58%	0.44%	0.26%	3.57	6.05
Ally	0.25%	11.63%	1.10%	0.02	0.23
Peer Weighted Average	0.81%	0.96%	0.40%	0.84	2.01

Source: Moody's Analytics and FDIC Call Report data

This information can be used alongside the benchmark and idiosyncratic knowledge of the portfolio evolution over time to determine whether a given bank is better reserved than a given peer.

We review Bank of America using information from its last earnings report to establish a view on its level of allowances as of Q4 2020, and provide information on what to expect going into Q1 2021 based on our benchmark.

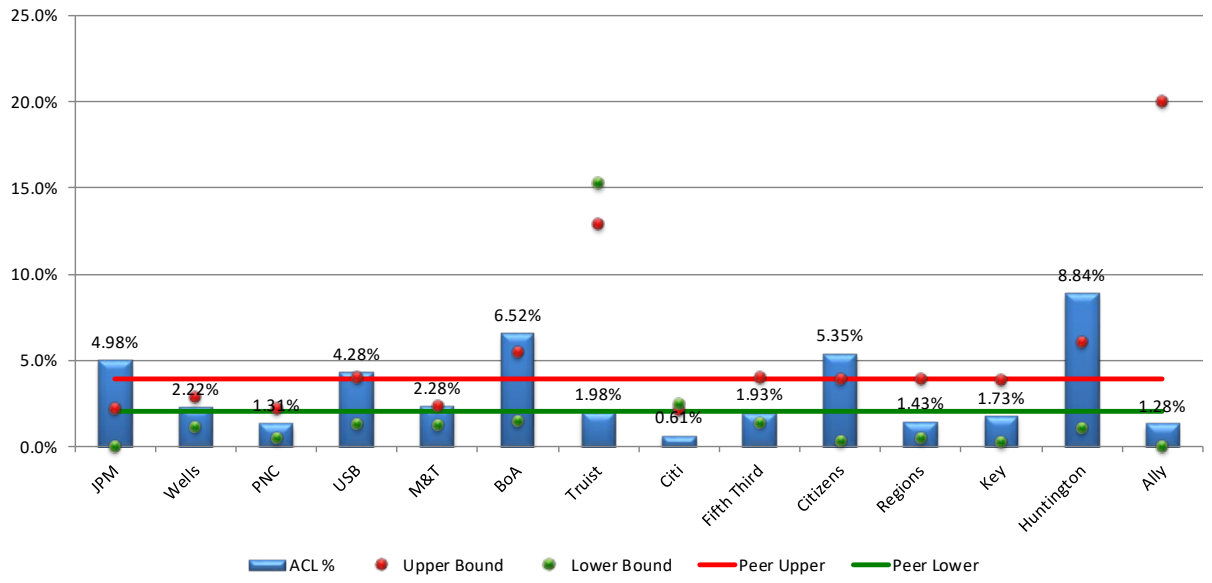
While Bank of America appears to have a relatively low loss allowance for residential mortgages as compared to peers, it is still more than double the allowance rate compared to when the year began with post-CECL adoption (moving from .09% to .21% when removing any home equity loans). In addition, the bank also saw about half of the NCO level in 2020 as it did in 2019. With the continued government stimulus and strong housing outlook, it is not likely to see any significant allowance increase in this portfolio. Given the current allowance level and its already relatively low level, it is also not expected to see dramatic releases occur, either.

CRE construction

CRE construction portfolios saw relatively large increases in reserves on a percentage basis in 2020. The construction industry has been hit hard by the pandemic overall as employment declined greatly at the end of Q1 but has since partially rebounded. The pandemic has caused construction delays and much uncertainty, especially around future demand in sectors such as retail and office. We have observed reserve builds due to these factors.

Figure 17 presents the peer group's current ACL reserve ratio for Q3 2020 (blue bars), as well as the peer group upper and lower bound (red and green lines) and the bank's own upper and lower bound (red and green dots). The peer group's upper and lower bounds are 3.92% and 1.58%, respectively. As overall economic conditions have improved since the prior quarter, the upper and lower bounds have both been reduced, while banks have been maintaining reserves. Most banks find themselves below their own upper bounds except for JP Morgan Chase, Bank of America, Citizens Bank, and Huntington Bank. These four banks also sit above the peer average upper bound, in addition to their own upper bound. The specific bounds for Truist Bank and Ally Bank are perplexing but if we examine the results more closely, we can explain this abnormal behavior. The Ally Bank variance is due to the very small portfolio and the fact that its maximum NCO during the last financial crisis is larger than the current allowance. The Truist Bank anomaly is due to our call report forecast model that generates ACL rates of over 30 to 45% based on the scenario severity and its historical pattern of losses. In an ideal world, we would remove those metrics from the index and weight them to a lesser extent to avoid generating such outlier behavior.

Figure 17 Q3 peer benchmark for construction portfolio



Source: Moody's Analytics and FDIC Call Report data

The results in Figure 18 show that while some banks reduced their construction allowance in Q3, most have increased modestly. Bank of America increased its reserves the most aggressively in Q3 as it now sits above both its own upper and peer group average upper bounds. With the economic outlook improving, we expect a more broad-based reduction in allowance.

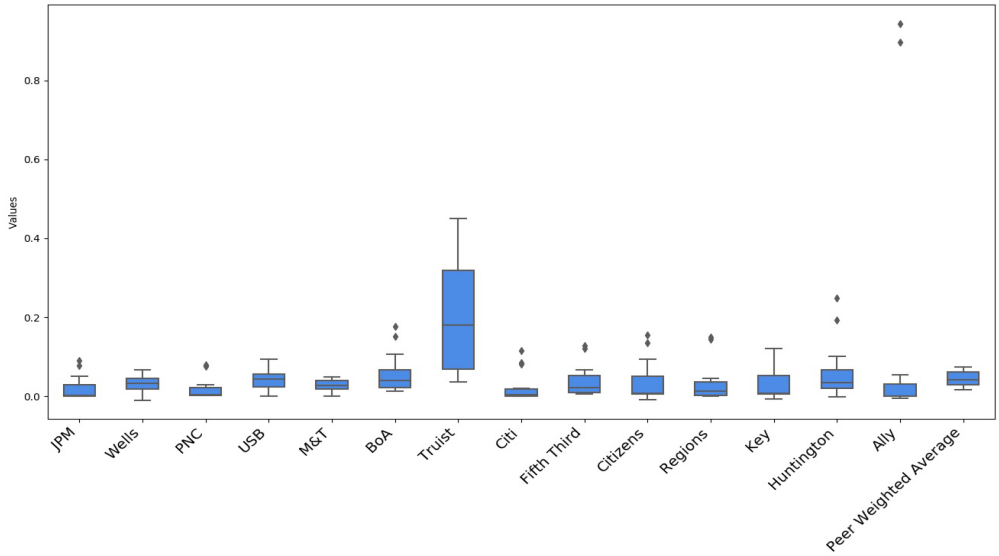
Figure 18 ACL metrics for peer group – construction

Bank Name	ACL Q2 %	ACL Q3 %	Q2 to Q3 % change	Upper Bound	Mid-Point	Lower Bound	% Lower Bound
JPM	5.76%	4.98%	-13.52%	2.18%	1.10%	0.03%	18336.34%
Wells	2.04%	2.22%	8.96%	2.90%	2.04%	1.17%	90.36%
PNC	1.16%	1.31%	12.60%	2.20%	1.33%	0.47%	179.93%
USB	3.23%	4.28%	32.66%	3.98%	2.67%	1.36%	215.96%
M&T	2.43%	2.28%	-6.51%	2.39%	1.83%	1.26%	80.85%
BoA	2.65%	6.52%	146.56%	5.48%	3.50%	1.52%	329.04%
Truist	1.94%	1.98%	1.76%	12.93%	14.09%	15.25%	-87.03%
Citi	0.57%	0.61%	7.12%	2.15%	2.32%	2.49%	-75.33%
Fifth Third	1.85%	1.93%	4.35%	4.04%	2.72%	1.40%	37.95%
Citizens	7.44%	5.35%	-28.09%	3.95%	2.13%	0.31%	1650.75%
Regions	1.73%	1.43%	-17.55%	3.97%	2.25%	0.54%	165.73%
Key	2.12%	1.73%	-18.32%	3.87%	2.06%	0.25%	580.98%
Huntington	5.07%	8.84%	74.62%	6.06%	3.56%	1.06%	736.65%
Ally	1.07%	1.28%	19.87%	20.03%	10.02%	0.00%	inf

Source: Moody's Analytics and FDIC Call Report data

The dispersion of the metrics in Figure 19 shows construction tends to have a tighter range of results than other portfolios, as our model results produce fairly elevated results under the Baseline scenario. Also, under an S3 scenario, the results have a more moderate increase compared to other portfolios. Truist Bank is an outlier as its dispersion results are much greater. Under the CECL forecast model, its results are very adverse under both Baseline and S3 scenario forecasts, which is pushing up both its upper and lower bounds.

Figure 19 Benchmark individual metrics dispersion – construction



Source: Moody's Analytics and FDIC Call Report data

Figure 20 illustrates the riskiness indicators for the construction portfolio in terms of ACL coverage in quarters, as well as the maximum and average NCO experienced during the last financial crisis compared to their peers. JP Morgan Chase and Citizens Bank have riskiness indicators that are better than the average for the peer group despite having some of the larger reserves among the peer group. Note that green is better than peer average.

Figure 20 Riskiness indicators relative to peers – construction

Bank Name	ACL %	NCO % max	NCO % avg	NCO max coverage quarters	NCO avg coverage quarters
JPM	4.98%	1.94%	0.45%	2.57	11.09
Wells	2.22%	1.11%	0.42%	1.99	5.25
PNC	1.31%	2.81%	0.78%	0.46	1.67
USB	4.28%	1.80%	0.68%	2.37	6.29
M&T	2.28%	2.60%	0.66%	0.88	3.46
BoA	6.52%	1.97%	0.83%	3.31	7.90
Truist	1.98%	3.49%	0.97%	0.57	2.05
Citi	0.61%	3.83%	0.65%	0.16	0.95
Fifth Third	1.93%	7.83%	1.97%	0.25	0.98
Citizens	5.35%	2.19%	0.77%	2.45	6.97
Regions	1.43%	5.04%	1.55%	0.28	0.92
Key	1.73%	4.12%	1.74%	0.42	0.99
Huntington	8.84%	2.53%	0.94%	3.49	9.39
Ally	1.28%	122.61%	10.18%	0.01	0.13
Peer Weighted Average	2.91%	2.90%	0.79%	1.00	3.67

Source: Moody's Analytics and FDIC Call Report data

This information can be used alongside the benchmark and idiosyncratic knowledge of the portfolio evolution over time to determine whether a given bank is better reserved than a given peer.

Citizens Bank experienced large reserve builds overall from Q1 to Q3 2020, with a more modest build in Q4. For construction, in particular, its reserve build was substantial in Q2 2020. It pulled back slightly in the following quarter as it had a modest release in Q3. This trend may continue as the economic outlook improves, although there is much uncertainty as it may choose to hold steady at comfortable reserve levels, where it sits above its own bank upper-bound benchmark and above the peer group upper

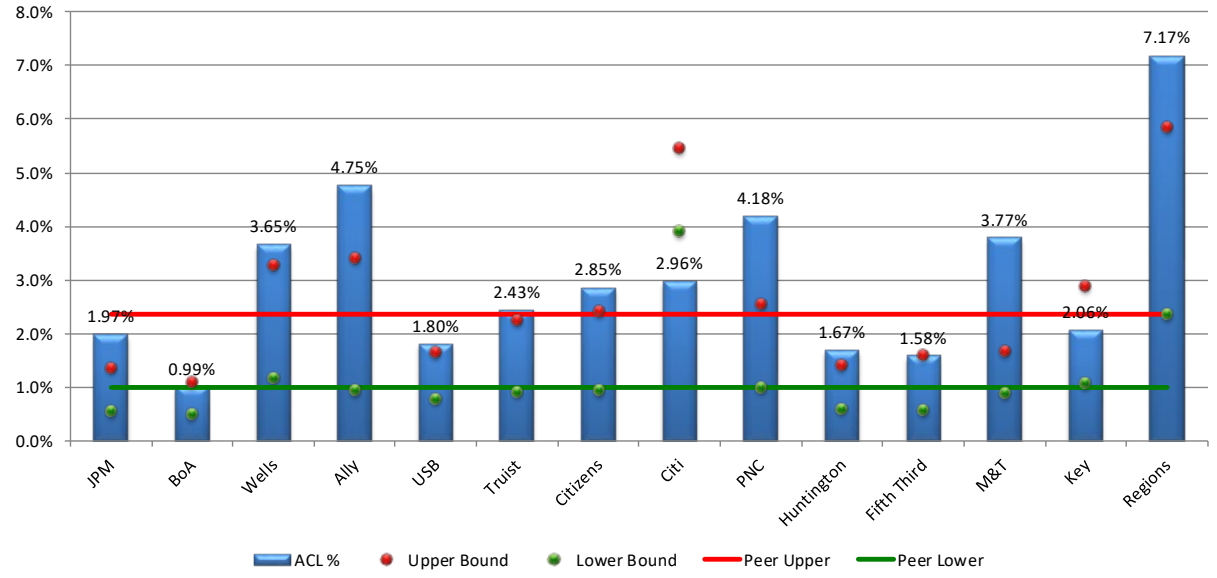
bound. In the latest call report (Q4 2020), Citizens Bank had a significant release of reserves from 5.35% to 3.71% for the construction portfolio, putting it just below the peer group's upper bound of 3.92%. This aligns more closely with our benchmark, moving from an over-reserved position to a well-reserved position.

Other retail

As expected, other consumer or retail loans continue to find their reserving thresholds ranging somewhere between residential mortgages and credit cards. We also find that given the large variety of loan structures and collateral types that underlie this category, there are larger variations in both the benchmark and allowance rates per bank. For example, banks in which this portfolio comprises mostly auto loans will see different results from the study as banks with mostly short-term lending. The variety of loan types in this category can also make finding one or two key drivers of change or differences a bit more challenging. That said, similar to residential mortgages and despite a continually high unemployment rate, losses in this portfolio remain low, which we project as the outlook going forward. This results in a relatively small allowance rate for loans in this category.

Figure 21 depicts the peer group's current ACL reserve ratio for Q3 2020 (blue bars), as well as the peer group's upper and lower bound (red and green lines) and the bank's own upper and lower bound (red and green dots). The peer group's upper and lower bounds are 2.36% and 0.99%, respectively. As shown in Figure 21, however, those upper and lower bounds change significantly as you review the individual banks within the peer group. For example, the upper and lower bounds for Regions Bank are 5.85% and 2.37%, respectively, which amounts to more than double the average for the overall peer group. However, despite that range of outcomes from the benchmark study, nearly all of the banks in the peer group have reserved either at or above their respective upper-bound allowance rate. The only exceptions to this are Key Bank, which is between the upper and lower bounds, and Citibank, which represents the only bank that has reserved below its lower-bound rate.

Figure 21 Q3 peer benchmark for other retail loans portfolios



Source: Moody's Analytics and FDIC Call Report data

Figure 22 shows how each bank's reserves have evolved from Q2 to Q3 as well as their own upper- and lower-bound values. The final % Lower Bound column represents how far above the lower bound the Q3 2020 ratio is. The results in the table show that ACL changes were slight for all banks as they relate to the other retail loan portfolio. Continuing the discussion about Key Bank, note that it released over 13% of its reserve in this loan type. This release of reserves accounts for a majority of the difference between its current reserve balance and the upper bound of our study. It will be interesting to observe in the coming quarters whether others in this peer group follow Key Bank's example and begin releasing larger percentages of reserves and bringing them closer to their midpoint of our benchmark result.

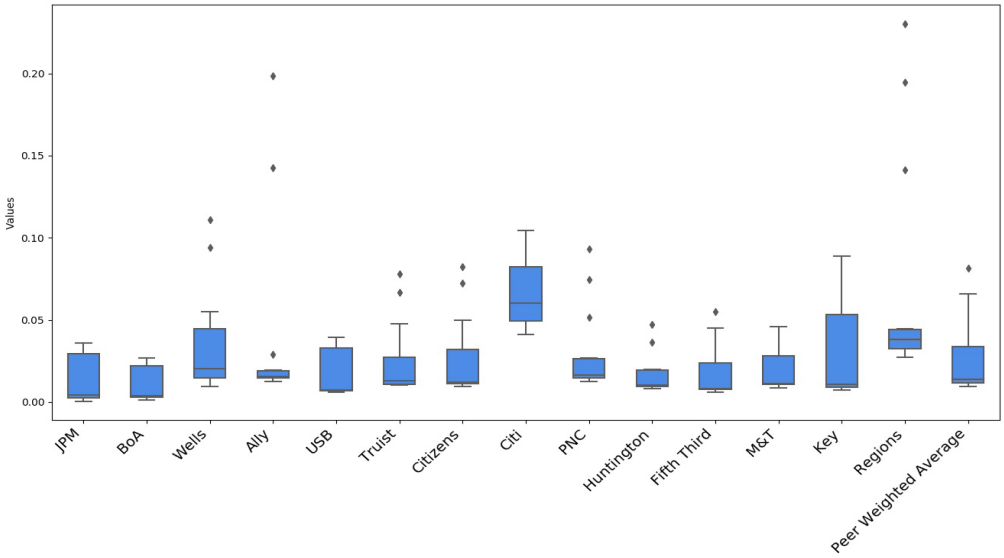
Figure 22 ACL metrics for peer group – other retail

Bank Name	ACL Q2 %	ACL Q3 %	Q2 to Q3 % change	Upper Bound	Mid-Point	Lower Bound	% Lower Bound
JPM	2.12%	1.97%	-7.24%	1.37%	0.97%	0.57%	247.09%
BoA	1.02%	0.99%	-2.32%	1.09%	0.79%	0.49%	101.01%
Wells	3.85%	3.65%	-5.19%	3.29%	2.23%	1.18%	209.50%
Ally	4.79%	4.75%	-0.88%	3.40%	2.18%	0.95%	400.31%
USB	1.88%	1.80%	-4.24%	1.67%	1.23%	0.78%	128.93%
Truist	2.42%	2.43%	0.12%	2.25%	1.58%	0.92%	164.77%
Citizens	3.08%	2.85%	-7.57%	2.42%	1.68%	0.94%	204.02%
Citi	3.17%	2.96%	-6.71%	5.47%	4.70%	3.92%	-24.62%
PNC	4.59%	4.18%	-8.83%	2.56%	1.78%	1.00%	316.84%
Huntington	1.86%	1.67%	-10.03%	1.42%	1.01%	0.60%	179.55%
Fifth Third	1.98%	1.58%	-20.24%	1.59%	1.08%	0.57%	174.37%
M&T	3.74%	3.77%	0.79%	1.68%	1.30%	0.91%	314.65%
Key	2.37%	2.06%	-13.17%	2.90%	1.99%	1.09%	89.42%
Regions	6.75%	7.17%	6.18%	5.85%	4.11%	2.37%	202.30%

Source: Moody's Analytics and FDIC Call Report data

Figure 23 gives a sense of the dispersion of the metrics that were used in building the benchmark. Such information can be used to interpret which banks may be exposed to more or less volatility. The tighter range of results means that for all of the different metrics computed that are part of the benchmark, some have a much smaller range of sensitivity (we use different models but also different scenarios), leading us to interpret that those banks with small ranges should have less-volatile reserves over time. On this box plot, it is interesting to note that despite having the larger reserve percentage in this category among its peers, Regions Bank comparatively shows very little volatility.

Figure 23 Benchmark individual metrics dispersion – other retail



Source: Moody's Analytics and FDIC Call Report data

Figure 24 illustrates the riskiness indicators for the mortgage portfolio in terms of ACL coverage in quarters, as well as the maximum and average NCO experienced during the last financial crisis as compared to their peers. Note that green is better than peer average.

Figure 24 Riskiness indicators relative to peers – other retail

Bank Name	ACL %	NCO % max	NCO % avg	NCO max coverage quarters	NCO avg coverage quarters
JPM	1.97%	0.57%	0.34%	3.43	5.79
BoA	0.99%	0.45%	0.28%	2.22	3.53
Wells	3.65%	0.90%	0.50%	4.05	7.28
Ally	4.75%	0.27%	0.10%	17.86	46.73
USB	1.80%	0.56%	0.41%	3.22	4.35
Truist	2.43%	0.57%	0.35%	4.25	6.89
Citizens	2.85%	0.62%	0.33%	4.56	8.57
Citi	2.96%	1.60%	1.13%	1.85	2.61
PNC	4.18%	1.81%	0.27%	2.31	15.67
Huntington	1.67%	0.57%	0.33%	2.92	5.15
Fifth Third	1.58%	0.58%	0.33%	2.70	4.71
M&T	3.77%	0.58%	0.34%	6.55	11.05
Key	2.06%	1.15%	0.68%	1.80	3.05
Regions	7.17%	0.51%	0.32%	13.93	22.54
Peer Weighted Average	2.67%	0.68%	0.37%	3.94	7.13

Source: Moody's Analytics and FDIC Call Report data

This information can be used alongside the benchmark and idiosyncratic knowledge of the portfolio evolution over time to determine whether a given bank is better reserved than a given peer.

We review Citibank using information from its last earnings report to establish a view on its level of allowances as of Q4 2020, and provide information on what to expect going into Q1 2021 based on our benchmark.

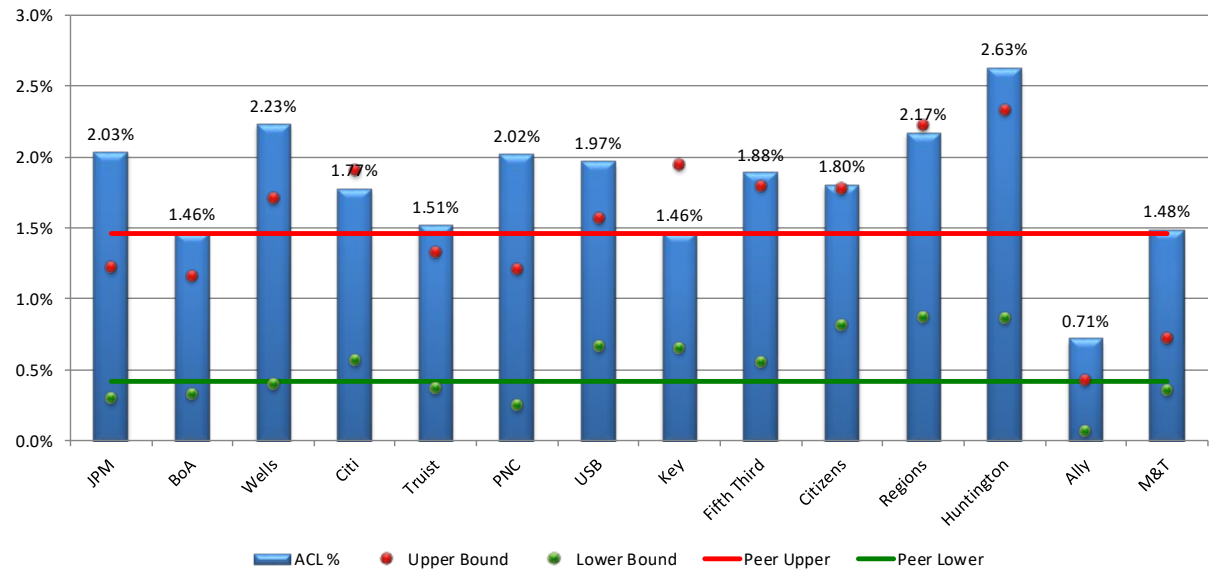
Overall, Citibank maintained a relatively stable allowance balance in Q4, except for its institutional clients group. The activity shown above for the other consumer loans holds true to that overall result. In addition, Citibank's reserving levels for this loan type are consistent with its peers. However, our benchmark process produced an outcome that would have expected its levels to be higher than they currently are. Despite that analysis, given the slow release of reserves by Citibank over the past quarter, we would not expect to see it build reserves to the levels of our lower-bound expectation in the coming quarters. However, based on the latest call report data, Citibank added to its reserves for the other retail portfolio—not as aggressively as the benchmark indicates (Q4 3.27% versus Q3 2.95%) but nonetheless breaking the trend of releasing seen in other portfolios. It is worth noting that in conjunction with a balance reduction of 14.8% in Q4 2020, this represents a significant allowance build for Citibank.

Commercial and industrial

Commercial and industrial (C&I) portfolios saw increases in reserves in the first half of 2020, as smaller businesses were especially hard hit by the pandemic. We have seen reserves remaining stable after Q2 2020 as banks held steady in the face of uncertainty. Economic conditions improved in the latter half of the year; therefore, the modeled results that affect this benchmark study's upper and lower bounds have been declining at a faster pace than banks releasing reserves.

Figure 25 shows the peer group's current ACL reserve ratio for Q3 2020 (blue bars), as well as the peer group's upper and lower bound (red and green lines) and the bank's own upper and lower bound (red and green dots). The peer group's upper and lower bounds are 1.46% and 0.42%, respectively. As overall economic conditions have improved since the prior quarter, the upper and lower bounds have both been reduced while banks have maintained reserves. The peer set of banks all find themselves at or above the peer group average upper bound except for Ally Bank, although Ally Bank's Q3 C&I reserve remains above its own upper bound. Two banks—Citibank and Key Bank—sit further below their own upper bound.

Figure 25 Q3 peer benchmark for commercial and industrial portfolio



Source: Moody's Analytics and FDIC Call Report data

The results in Figure 26 show that most banks had a modest C&I reserve build in Q3, but some also had modest declines. Key Bank increased its C&I reserves the most in Q3 as it is now much closer to its own upper bound than the prior quarter, and is now equal to the peer group average upper bound. JP Morgan Chase had the largest decrease in its C&I allowance rate among the peer group but still sits well above its own bank and peer group upper bounds, so this trend may continue for others as the economic outlook improves.

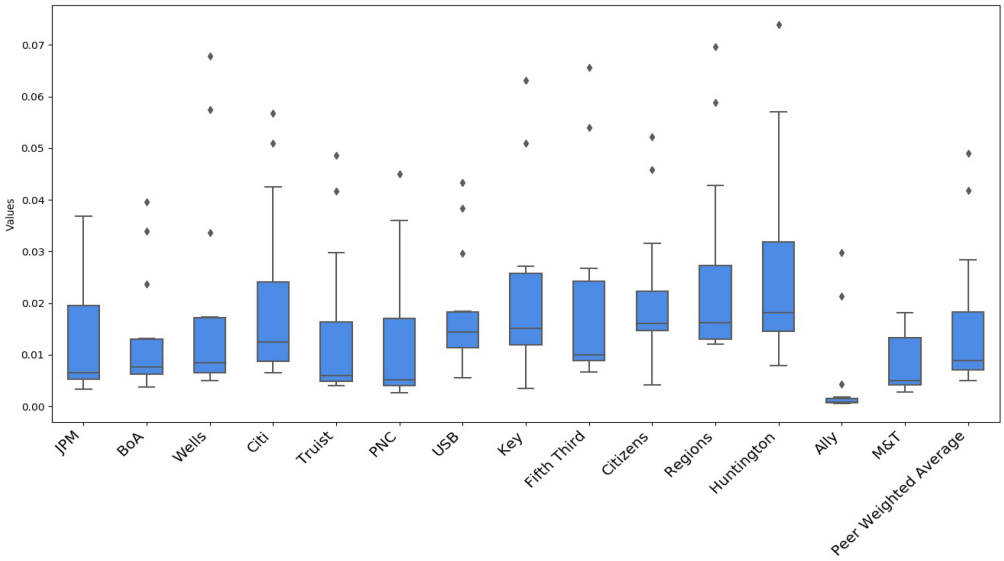
Figure 26 ACL metrics for peer group – C&I

Bank Name	ACL Q2 %	ACL Q3 %	Q2 to Q3 % change	Upper Bound	Mid-Point	Lower Bound	% Lower Bound
JPM	2.22%	2.03%	-8.77%	1.22%	0.76%	0.30%	586.50%
BoA	1.29%	1.46%	13.24%	1.17%	0.75%	0.33%	343.43%
Wells	2.02%	2.23%	10.38%	1.71%	1.05%	0.39%	464.27%
Citi	1.77%	1.77%	0.44%	1.91%	1.23%	0.56%	214.97%
Truist	1.42%	1.51%	6.40%	1.33%	0.85%	0.37%	310.41%
PNC	1.98%	2.02%	1.89%	1.22%	0.73%	0.25%	715.32%
USB	2.00%	1.97%	-1.61%	1.57%	1.12%	0.67%	195.38%
Key	1.24%	1.46%	17.51%	1.95%	1.30%	0.65%	123.09%
Fifth Third	1.72%	1.88%	9.75%	1.79%	1.18%	0.56%	238.58%
Citizens	1.82%	1.80%	-0.83%	1.78%	1.30%	0.81%	121.57%
Regions	2.09%	2.17%	3.64%	2.23%	1.55%	0.87%	147.85%
Huntington	2.67%	2.63%	-1.55%	2.34%	1.60%	0.86%	204.84%
Ally	0.73%	0.71%	-3.08%	0.43%	0.25%	0.07%	917.10%
M&T	1.36%	1.48%	8.78%	0.73%	0.55%	0.36%	312.30%

Source: Moody's Analytics and FDIC Call Report data

The dispersion of the metrics in Figure 27 shows C&I tends to have a uniform range of results, except for Ally Bank. Our CECL forecaster model produces low results for Ally Bank even when applying more adverse scenarios. This leads to a tighter range of results than the different metrics computed. As in the CECL forecaster model that is part of the benchmark, there is a much smaller range of sensitivity. Therefore, these smaller ranges should lead to less-volatile reserves over time.

Figure 27 Benchmark individual metrics dispersion – C&I



Source: Moody's Analytics and FDIC Call Report data

Figure 28 illustrates the riskiness indicators for the commercial portfolio in terms of ACL coverage in quarters, as well as the maximum and average NCO experienced during the last financial crisis compared to their peers. Citibank has a riskiness indicator that is worse than the peer group's average, but its C&I reserves are not much higher among the peer group. This can be attributed to lessons learned in the previous downturn and portfolio optimization that is more risk averse. Note that green is better than peer average.

Figure 28 Riskiness indicators relative to peers – C&I

Bank Name	ACL %	NCO % max	NCO % avg	NCO max coverage quarters	NCO avg coverage quarters
JPM	2.03%	0.69%	0.24%	2.92	8.53
BoA	1.46%	0.54%	0.19%	2.69	7.72
Wells	2.23%	0.46%	0.21%	4.85	10.49
Citi	1.77%	0.83%	0.33%	2.15	5.44
Truist	1.51%	0.33%	0.18%	4.60	8.42
PNC	2.02%	0.55%	0.20%	3.64	9.89
USB	1.97%	0.45%	0.19%	4.37	10.14
Key	1.46%	0.83%	0.36%	1.75	4.07
Fifth Third	1.88%	1.17%	0.36%	1.61	5.22
Citizens	1.80%	0.53%	0.26%	3.40	6.89
Regions	2.17%	0.61%	0.31%	3.53	7.06
Huntington	2.63%	3.12%	0.74%	0.84	3.57
Ally	0.71%	0.61%	0.06%	1.16	11.78
M&T	1.48%	0.46%	0.19%	3.20	7.89
Peer Weighted Average	1.83%	0.64%	0.24%	2.86	7.64

Source: Moody's Analytics and FDIC Call Report data

This information can be used alongside the benchmark and idiosyncratic knowledge of the portfolio evolution over time to determine whether a given bank is better reserved than a given peer.

The majority of the peer groups' C&I portfolios sit well above their own bank's upper-bound benchmark as well as above the peer group's upper bound. Looking forward, we expect the bounds to continue decreasing. If banks follow suit, the timing for when they start releasing commercial reserves is unknown. Banks such as JP Morgan Chase were well prepared in the run up of its allowance at the onset of the pandemic; it was one of the early ones to recognize this in Q3 as it reduced commercial reserves with the

improved outlook. We would expect this trend to continue for the bank around its commercial exposures heading into 2021. However, trends will differ by banks. Truist Bank, which sits right at the peer group upper bounds, saw a 1.9% reduction in balances in Q4 but did not release in any material fashion (1.51%). JP Morgan Chase, which is much higher than the peer group's upper bounds, saw significant release moving from 2.02% to 1.65% while its portfolio balances grew by 4.5%. Our benchmark provides useful background justification for this difference, which could be hard to understand without knowing where banks should be relative to each other.

Summary and takeaways

The main reason for undertaking this research was to understand if there was a practical way to produce an upper- and lower-bound index that could provide a reasonable indicator of the level of reserves across a set of peer banks. This third paper in the benchmark series shows that a triangulation index built on different heuristic measures for both a peer group and a bank can give management the necessary guardrails to understand where they are relative to peers in their reserve practices. We found evidence that by combining top-down methodologies and riskiness indicators, we can better grasp the position in which each individual bank finds itself among its peer group for the current and following quarters.[3]

Comparing ACLs from different call reports and historical experiences during the Great Recession is almost impossible given the underlying assumptions that remain undisclosed (that is, weighted average portfolio life) and the difference in portfolio composition. Furthermore, economic environmental uncertainty, lack of clarity on the timing of NCOs, and the impact of government support will affect different banks in various ways. Thus, it is vital to understand the parameters of your allowance and know where you stand with respect to your peer group, whether you are above the upper bound or below the lower bound. Such knowledge is crucial for management teams.

We have now automated the process of building the triangulation index based on the outlined measures. This means that we can conduct this analysis on any peer group and at a portfolio level within days. If you have tried to find a reliable benchmark range for you and your peers, feel free to contact us. We offer executive management a view on the array of possible results, especially when internal model reliance is brought into question.

[3] We expect that once the economic environment stabilizes, the benchmark range can be valid for more than one to two quarters, making it a lasting benchmark.

Additional resources from Moody's and Moody's Analytics

- Moody's Topic Page on COVID-19
- CECL Build – Is it Enough?
- CECL Benchmark Q3
- CECL Benchmark Q2
- CECL Adoption and Q1 Results Amid COVID-19
- Pre-COVID-19 Health of Small Businesses
- EDF Report September 2020 for North American Corporate Firms

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