

DFAST 2021 Stress Tests: Banks Remain Highly Resilient but Bank-Specific Results Are Hard to Predict

06.25.21



Yesterday, the Federal Reserve Board released the highly anticipated 2021 DFAST stress test results. The results have proven again that large banks are extremely well capitalized. As shown in Exhibit 1, the aggregate common equity tier 1 (CET1) capital ratio declined from 13 percent in the fourth quarter of 2020 to a minimum of 10.6 percent, or a 2.4-percent maximum decline in the ratio. As the Federal Reserve observes in its summary, “the average minimum CET1 capital ratio is more than double the banks’ minimum requirement of 4½ percent.” In addition, all banks remained well above their minimum CET1 requirement. As a reference for comparison, in the severely adverse scenario of the December and June 2020 stress tests, the peak-to-trough aggregate declines were 2.6 percent and 2.1 percent, respectively.¹

Francisco Covas

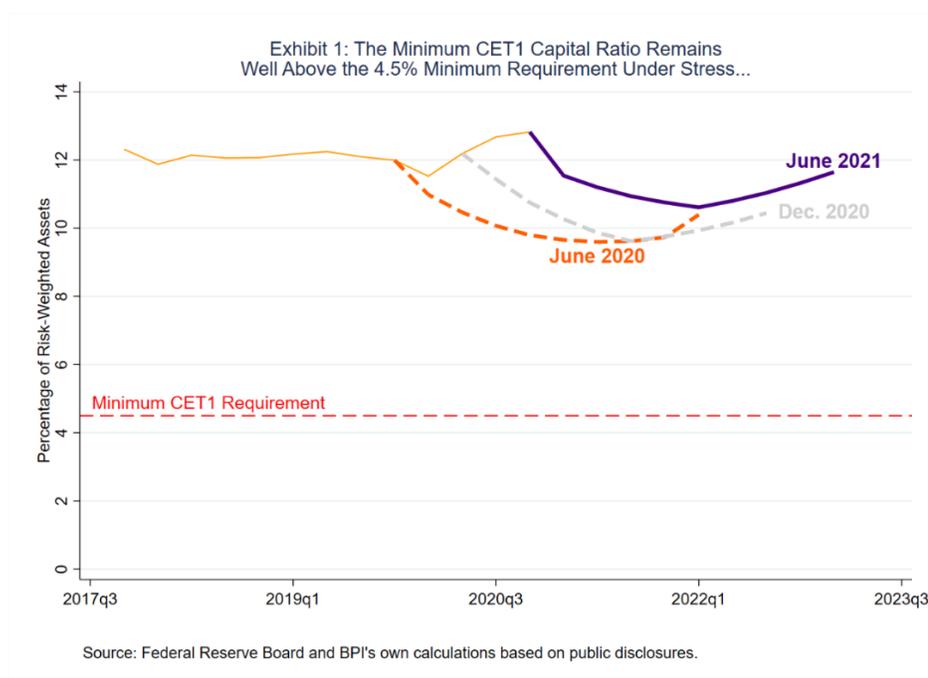
202.589.2413

Francisco.Covas@BPI.com

Gonzalo Fernandez Dionis

202.589.2432

Gonzalo.Dionis@bpi.com



As expected, pre-provision net revenue (PPNR) projections were lower than in the June 2020 results, similar to what happened in December. Lower interest rates and larger balance sheets led to reduced net interest income and higher noninterest expenses. The increase in expenses was driven by the massive forced increase in banks’ reserve balances (deposits at Federal Reserve banks) caused by the Fed’s continued balance sheet expansion since supervisory models use bank size to transform noninterest expense projections into dollar amounts. The weakness in interest income and expenses was partly offset by stronger capital market activities that resulted in higher noninterest income projections.

Aggregate losses were nearly identical to those reported in the June 2020 stress tests and lower than those reported last December. Given the large projected drop in CRE prices in the severely adverse

¹ There are 23 banks participating in the June 2021 stress tests; the December and June 2020 tests included 33 banks.

scenario, loan losses rose sharply for CRE loans relative to June 2020. However, the increase in CRE losses was nearly offset by a decline in credit card losses. Despite aggregate loan losses staying flat, provisions were \$100 billion lower, driven by the allowance build banks made last year. In turn, the smaller provisions were an offset to the decline in PPNR.

Although the average maximum decline of regulatory capital ratios exceeded the decline seen a year ago, the average stress capital buffer would remain close to 3.3 percent, were dividends to stay at last year's levels. However, because dividends are expected to increase after banks announce their planned capital actions early next week, we expect the 2021 average SCB to exceed 3.3 percent.

While the average peak decline in the CET1 ratio was little changed across the December 2020 and June 2021 stress tests, **we observe material moves in the peak-to-trough decline of CET1 capital ratios of individual banks.** The large variability in firm performance in the tests shows that stress test results of individual firms are not easy to predict. In addition, the large variability in results leads to significant volatility in capital requirements and may induce banks to increase their own capital buffers for precautionary reasons. Alternatively, banks may try to offset the volatility in capital requirements by letting share repurchases continue to serve as a cushion and limiting the size of dividends in total payouts.

Finally, it is worth noting that the integration of the stress tests into the ongoing non-stressed capital requirements via the SCB framework is **equivalent to adding the global systemically important bank (GSIB) capital surcharge to the post-stress minimum requirements.** In order to prevent a material increase in capital requirements of the largest banks, the stress tests no longer assumes banks need to prefund all capital distributions over the nine quarters of the planning horizon and instead the SCB includes four quarters of planned dividends. In addition, the stress tests assume banks' balance sheets remain constant over the stress planning horizon. These two changes roughly cancel out the increase in capital requirements that results by adding the GSIB surcharge to the stress test hurdle rate.

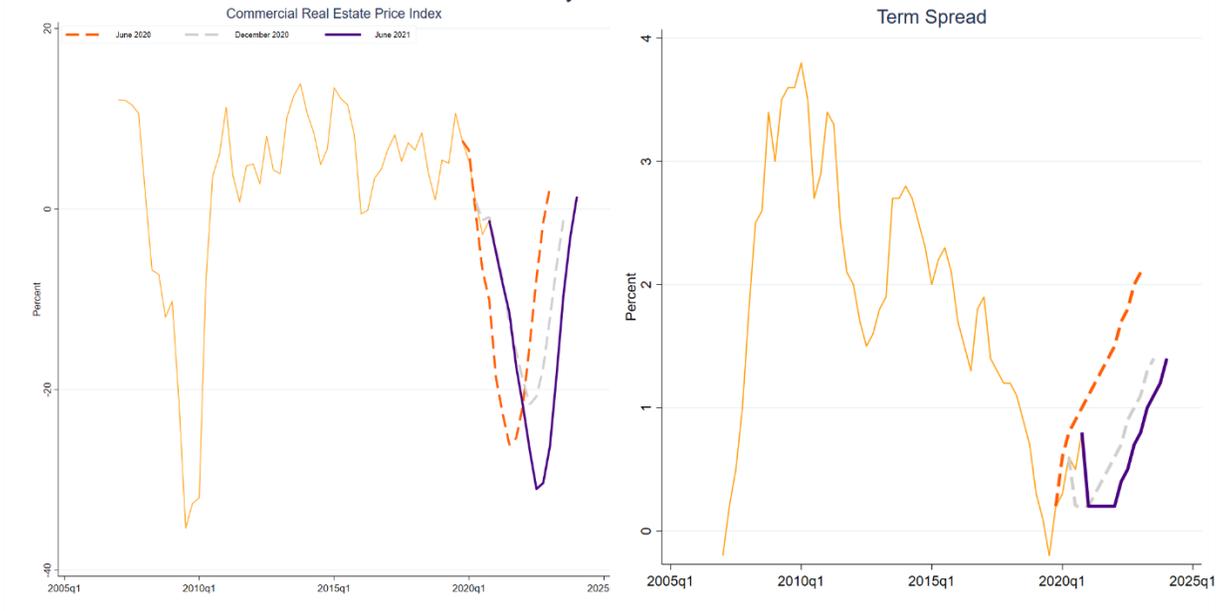
The June 2021 stress scenario was severe...

Similar to last year's stress scenario, the 2021 stress scenario includes a severe global recession accompanied by vulnerabilities in commercial real estate and corporate debt markets. The heightened risks were intended to capture lingering risks associated with the COVID event that led to increased vulnerabilities in retail, office and hotel properties and a sharp rise in corporate borrowings. More broadly, this year's stress tests include on a start-to-stress basis:

- ▶ A 4 pp increase in the unemployment rate.
- ▶ A 3.9 percent fall in real GDP.
- ▶ A 4.3 pp increase in BBB spreads.
- ▶ A 24 percent decline in house prices.
- ▶ A 40 percent drop in commercial real estate prices.
- ▶ A 55 percent drop in the stock market.

The left panel in Exhibit 2 compares the evolution of CRE prices across the 2020 and 2021 stress tests. The commercial real estate price index follows a considerably more severe course in the June 2021 stress tests relative to that of both stress tests last year. The peak YoY decline is -31 percent, compared with -26 percent in June 2020 and -21.6 percent last December. Another important macroeconomic variable that drives projected pre-provision net revenue is the term spread, shown in the right panel of Exhibit 2. The lower term spread in the June 2021 scenario relative to both of last year's severely adverse scenarios creates more headwinds for bank profitability through lower net interest income projections.

Exhibit 2: Key Scenario Variables



Loan losses stayed flat and provisions fell materially...

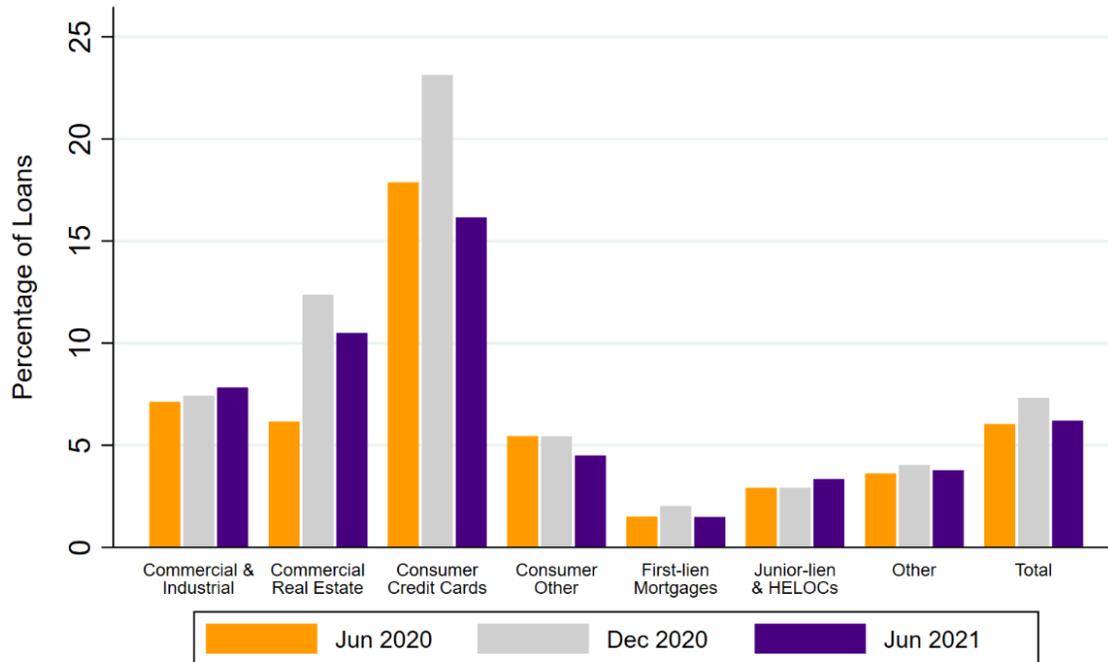
As shown in Table 1, **total loan losses stayed flat for the 23 participating banks in this year's stress tests** relative to the June 2020 tests. The rise in projected CRE loan losses was offset by the decrease in consumer loan losses, especially credit card loans. Notwithstanding the fact that loan losses stayed flat relative to the June 2020 stress tests, **provisions fell \$100 billion because of last year's allowance build.**

Table 1: Projected Loans Losses under the Severely Adverse Scenario

Loan Type	June 2021	December 2020	June 2020
Commercial and Industrial	91.7	99.8	92.8
Commercial Real Estate	66.8	79.9	38.5
First-lien Mortgages	16.7	23.0	17.2
Junior Liens and HELOCs	5.3	5.1	5.7
Credit Cards	91.1	129.4	118.2
Other Consumer	24.1	28.5	29.3
Other Loans	57	54.5	49.3
Total Loan Losses	353.0	420.0	351.0
Provisions	294.1	350.6	394.9

Note: All values are in billions of dollars. Projections include all 23 banks that participated in all three rounds of stress tests in 2020 and 2021.

Exhibit 3: CRE Loss Rates Increased Relative to June While Consumer Loss Rates Fell...



Source: Federal Reserve Board Dodd-Frank Act Stress Tests, BPI calculations.

As shown in Exhibit 3, the loss rate for CRE loans increased 440 bps relative to June 2020 and was the second highest rate since at least 2013. The loss rate for CRE loans fell 190 bps versus the one reported in the December stress tests. Relative to BPI’s forecast, projected CRE losses came up about \$10 billion higher this year. The loss rate on C&I loans also rose 70 bps, consistent with the more severe path of the BBB corporate bond spread in this year’s scenario, and in line with expectations.

The loss rate on first-lien mortgage loans stayed flat relative to the June 2020 test. Recall that in the December stress tests, losses on first-lien mortgage loans increased 50 bps relative to the June tests because of the elevated percentage of mortgage loans in forbearance. By contrast, the loss rate of credit card loans fell 170 bps and other consumer loans declined 90 bps.

Trading losses also remained flat..

Aggregate losses associated with the global market shocks rose slightly from \$83.2 billion in June 2020 to \$86.6 billion in this year’s test. The increase in trading losses was expected given the higher shocks for some of the most important risk factors like the widening of corporate bond spreads, sharp falls in CMBS prices and sizable decline in private equity asset valuations. This year’s trading and counterparty losses were nearly \$10 billion lower than losses reported in the December stress tests.

...and pre-provision net revenue declined.

The revenues banks generate under stress are the first line of defense against both loan and trading losses. As shown in Table 2, PPNR fell \$55 billion relative to the June 2020 stress tests. PPNR was little changed relative to the December 2020 stress tests and in line with BPI’s forecast.

Table 2: Projected Pre-Provision Net Revenue under the Severely Adverse Scenario

PPNR Subcomponents	June 2021	December 2020	June 2020
Net Interest Income	644.0	638.4	678.4
Noninterest Income	745.1	765.6	670.4
Noninterest Expense	1091.0	1097.8	994.8
Pre-Provision Net Revenue	298.4	306.0	353.8

Note: All values are in billions of dollars. Projections include all 23 banks that participated in all three rounds of stress tests in 2020 and 2021.

One driver of lower PPNR is the lower path of the term spread, which reduces net interest income. In addition, the supervisory forecasts are derived from models that use an autoregressive framework and last year’s weak performance of net interest income due to the low interest rate environment was projected to continue over subsequent quarters. Indeed, net interest income fell \$34 billion in this year’s test relative to DFAST 2020. By contrast, banks with substantial trading and investment banking operations generally saw an increase in their projections of noninterest income cumulatively over the nine quarters of the planning horizon. As a result, the aggregate projections of noninterest income increased nearly \$75 billion.

Projections of noninterest expense rose nearly \$100 billion relative to DFAST 2020. In the description of the results, the Federal Reserve noted that losses from operational risk events rose \$15 billion for the 23 firms that participated in DFAST 2021. As discussed earlier, noninterest expense projections are also elevated because of the growth of banks’ balance sheets (bank size also affects the projections of noninterest income) that was primarily caused by the [growth in the Fed’s balance sheet](#). In previous analysis we have [demonstrated](#) that it would be better for supervisory models to generate projections using the efficiency ratio since it is a key measure of banks’ operating performance and cost discipline. This would avoid the need to use total assets to transform the projections of noninterest expense (and noninterest income) into dollar amounts.

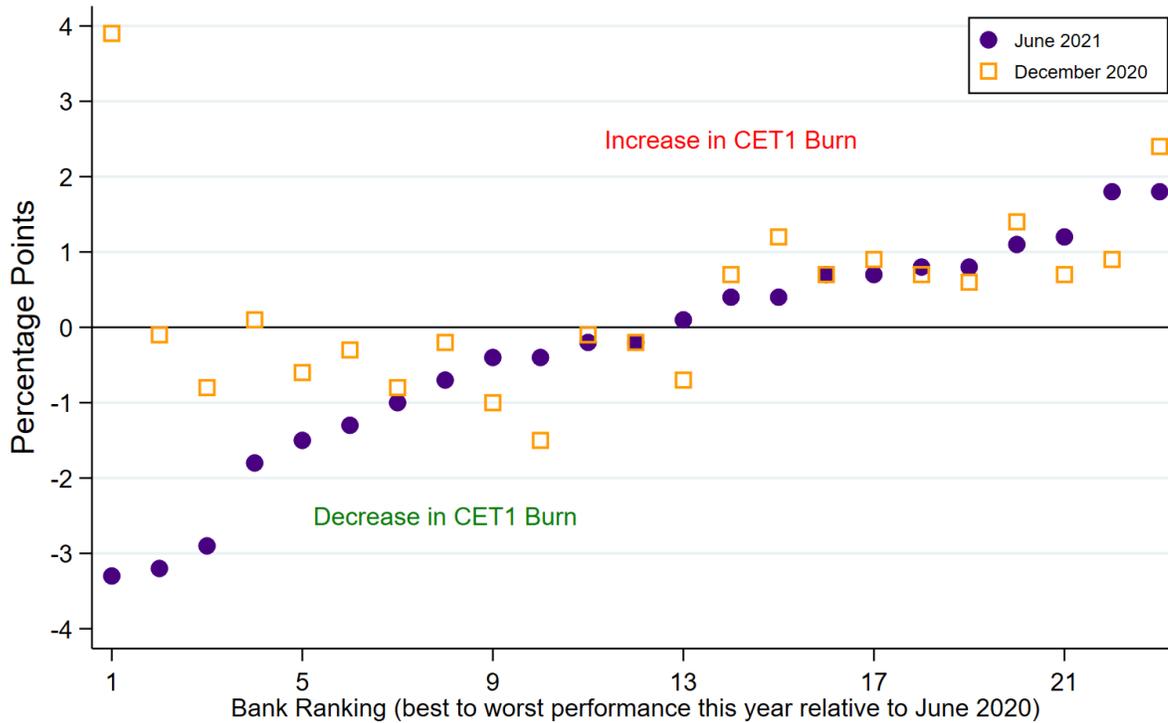
Stress test results are not predictable

The aggregate decline in the CET1 capital ratio in the June 2021 stress tests was nearly identical to the aggregate decline observed in June 2020 *for the same 23 banks* that participated in both tests. However, the performance of individual banks over time varies widely. This finding suggests bank-specific stress test results are not predictable at the bank level, even though the aggregate capital burn under stress shows less divergent behavior.

The variability of bank performance creates challenges for capital planning, because it leads to excess volatility in banks’ stress capital buffers. Banks can offset some of the volatility in capital requirements by using share repurchases as a cushion against large changes in their SCBs, or they can increase their management buffers.

Exhibit 4 depicts changes in stress test outcomes by bank (with the outcome being peak decline in a bank’s CET1 capital ratio, or “CET1 burn”) for June 2021 versus June 2020 (purple circles) and December 2020 versus June 2020 (orange squares). In other words, each purple circle in the chart represents the differences between the CET1 burn observed in the June 2021 stress tests relative to the June 2020 stress tests, and each orange square represents the difference between the CET1 burn observed in the December 2020 stress tests relative to the June 2020 stress tests. The banks are ranked—that is, ordered from left to right—with respect to increasing gaps between June 2021 and June 2020. Thus, the bank that ranks first experienced the largest *decrease* in CET1 burn in the June 2021 stress tests compared to June 2020, while the bank that ranks last experienced the largest increase in CET1 burn between the two tests.

Exhibit 4: The Large Variability in the Peak Decline in CET1 Capital Ratios Indicates Stress Test Results Are Difficult to Predict



Source: Federal Reserve Board, FR Y-9C, BPI calculations.

Some of the differences in CET1 burn across the various tests are massive. Take for example the bank that ranks #1. This bank experienced a 3.1 percent *decrease* in CET1 burn between June 2020 and June 2021, compared with its 3.9 percent *increase* in CET1 burn between June and December 2020. Although this bank is an extreme example, nearly half of the sample saw their CET1 burn increase more than 1 percentage point in absolute terms. If this trend continues to be the norm, such high volatility in capital requirements will eventually lead banks to increase their management buffers or continue to have share repurchases represent a larger share of capital distributions since those are easier to adjust relative to dividends.

Conclusion

The June 2021 stress test results again demonstrate that large U.S. banks are highly resilient in the face of an extremely severe stress scenario. Due to scenario severity, the average maximum decline of regulatory capital ratios in the 2021 stress tests exceed the decline of capital ratios a year ago. Even so, and although individual outcomes varied widely, stressed regulatory capital ratios of all banks remained well above minimum capital requirements. As a result, large banks will no longer be subject to restrictions on capital distributions beyond those envisioned by the stress capital buffer framework, and they are very well positioned to continue to support the economic recovery as loan demand strengthens.