December 2020 Stress Test Results

Board of Governors of the Federal Reserve System

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BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

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Preface

The Federal Reserve promotes a safe, sound, and efficient banking and financial system that supports the growth and stability of the U.S. economy through its supervision of bank holding companies (BHCs), U.S. intermediate holding company (IHC) subsidiaries of foreign banking organizations, savings and loan holding companies, and state member banks.

The Federal Reserve has established frameworks and programs for the supervision of the largest and most complex financial institutions to achieve its supervisory objectives, incorporating lessons learned from the 2007–09 financial crisis and in the period since. As part of these supervisory frameworks and programs, the Federal Reserve through its supervisory stress test assesses whether BHCs and U.S. IHCs with \$100 billion or more in total consolidated assets (together, firms) are sufficiently capitalized to absorb losses during stressful conditions while meeting obligations to creditors and counterparties and continuing to be able to lend to households and businesses. The Federal Reserve Board first adopted rules implementing these frameworks and programs in October 2012 and most recently modified these rules in March 2020.[1]

Each year, the Federal Reserve publicly discloses the results of its supervisory stress test, as implemented pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act. This document includes the results of the Federal Reserve's December 2020 supervisory stress test for the capital plan resubmission, including revenues, expenses, losses, pre-tax net income, and capital ratios projected under adverse economic and financial conditions. These results are projected using a set of models developed or selected by the Federal Reserve that take as inputs the Federal Reserve's scenarios and firm-provided data on their financial conditions and risk characteristics.

1 On October 10, 2019, the Board finalized a rule to amend its prudential standards to exempt firms with total consolidated assets of less than \$100 billion from the supervisory stress test and to subject certain firms with total consolidated assets between \$100 billion and \$250 billion to the supervisory stress test requirements on a two-year cycle (84 Fed. Reg. 59032 (Nov. 1, 2019)). Firms with \$250 billion or more in total consolidated assets or material levels of other risk factors remain subject to the supervisory stress test requirements on an annual basis.

On March 4, 2020, the Board approved a rule to simplify its capital rules for large firms through the establishment of the stress capital buffer requirement, which integrates the Board's stress test results with its non-stress capital requirements (85 Fed. Reg. 15576 (Mar. 18, 2020)).

Corrections

The Federal Reserve revised this report on June 24, 2021, to correct an error in the input data used to project BNP Paribas USA, Inc's pre-provision net revenue. The revision reduced projected pre-provision net revenue, projected pre-tax net income, and projected capital ratios for BNP Paribas USA, Inc. The revisions are listed below.

On p. 3, under the Executive Summary, the sentence "For the June stress test, PPNR under the severely adverse scenario was $430 billion for the same 33 firms." has been revised to "For the June stress test, PPNR under the severely adverse scenario was $429 billion for the same 33 firms."

On p. 27, under Table 3:

- 33 participating firms, Risk-weighted assets, Projected 2022:Q3 has been revised from 10,275.1 to 10,275.0.
- 33 participating firms, Pre-provision net revenue, Billions of dollars has been revised from 371.0 to 370.8.
- 33 participating firms, Net interest income, Billions of dollars has been revised from 741.9 to 741.8.
- 33 participating firms, Noninterest income, Billions of dollars has been revised from 889.6 to 889.8.
- 33 participating firms, Noninterest expense, Billions of dollars has been revised from 1,260.5 to 1,260.8.
- 33 participating firms, Net income before taxes, Billions of dollars has been revised from -172.6 to -172.8.

On p. 28, under Table 4:

- BNP Paribas USA, Inc., Stressed ratios with DFA stress testing capital action assumptions has been revised from 11.5 to 11.2.

On p. 30, under Table 5.B:

- BNP Paribas USA, Inc., CET 1 capital ratio (%), Ending has been revised from 11.5 to 11.2.
- BNP Paribas USA, Inc., CET 1 capital ratio (%), Minimum has been revised from 11.5 to 11.2.
- BNP Paribas USA, Inc., Tier 1 capital ratio (%), Ending has been revised from 11.5 to 11.2.
- BNP Paribas USA, Inc., Tier 1 capital ratio (%), Minimum has been revised from 11.5 to 11.2.
- BNP Paribas USA, Inc., Total capital ratio (%), Ending has been revised from 13.8 to 13.5.
- BNP Paribas USA, Inc., Total capital ratio (%), Minimum has been revised from 13.8 to 13.5.
- BNP Paribas USA, Inc., Tier 1 leverage ratio (%), Ending has been revised from 6.2 to 6.1.
- BNP Paribas USA, Inc., Tier 1 leverage ratio (%), Minimum has been revised from 6.2 to 6.1.

On p. 31, under Figure 11:

- BNP Paribas USA, Inc. changed from 4.3 to 4.6.

On p. 33, under Table 6:

- BNP Paribas USA, Inc., Pre-provision net revenue, Billions of dollars has been revised from 1.1 to 0.8.
- BNP Paribas USA, Inc., Net income before taxes, Billions of dollars has been revised from -3.9 to -4.2.
- 33 participating firms, Pre-provision net revenue, Billions of dollars has been revised from 371.0 to 370.8.
- 33 participating firms, Net income before taxes, Billions of dollars has been revised from -172.6 to -172.8.

On p. 36, under Figure 13:

- BNP Paribas USA, Inc. changed from 0.8 to 0.6.

On p. 37, under Figure 14:

- BNP Paribas USA, Inc. changed from -2.8 to -2.9.
- Median changed from -1.2 to -1.1.

On p. 39, the sentence “In the aggregate, the 33 firms are projected to generate $363 billion in PPNR cumulatively over the nine quarters of the projection horizon, equal to 2.0 percent of their combined average assets (see table 9).” has been revised to “In the aggregate, the 33 firms are projected to generate $363 billion in PPNR cumulatively over the nine quarters of the projection horizon, equal to 1.9 percent of their combined average assets (see table 9).”

On p. 40, under Table 9:

- 33 participating firms, Risk-weighted assets, Projected 2022:Q3 has been revised from 10,271.9 to 10,271.8.
- 33 participating firms, Pre-provision net revenue, Billions of dollars has been revised from 363.2 to 362.9.
- 33 participating firms, Pre-provision net revenue, Percent of average assets has been revised from 2.0 to 1.9.
- 33 participating firms, Net interest income, Billions of dollars has been revised from 747.5 to 747.4.
- 33 participating firms, Noninterest income, Billions of dollars has been revised from 878.8 to 879.0.
- 33 participating firms, Noninterest expense, Billions of dollars has been revised from 1263.2 to 1,263.5.
- 33 participating firms, Net income before taxes, Billions of dollars has been revised from -198.2 to -198.4.

On p. 41, under Table 10:

- BNP Paribas USA, Inc. changed from 11.1 to 10.8.

On p. 43, under Table 11.B:

- BNP Paribas USA, Inc., CET1 capital ratio (%), Ending has been revised from 11.1 to 10.8.
- BNP Paribas USA, Inc., CET1 capital ratio (%), Minimum has been revised from 11.1 to 10.8.
- BNP Paribas USA, Inc., Tier 1 capital ratio (%), Ending has been revised from 11.1 to 10.8.
- BNP Paribas USA, Inc., Tier 1 capital ratio (%), Minimum has been revised from 11.1 to 10.8.
- BNP Paribas USA, Inc., Total capital ratio (%), Ending has been revised from 13.8 to 13.5.
- BNP Paribas USA, Inc., Total capital ratio (%), Minimum has been revised from 13.8 to 13.5.
- BNP Paribas USA, Inc., Tier 1 leverage ratio (%), Ending has been revised from 6.0 to 5.8.
- BNP Paribas USA, Inc., Tier 1 leverage ratio (%), Minimum has been revised from 6.0 to 5.8.

On p. 44, under Figure 16:

- BNP Paribas USA, Inc. changed from 4.8 to 5.0.

On p. 46, under Table 12:

- BNP Paribas USA, Inc., Pre-provision net revenue, Billions of dollars has been revised from 1.0 to 0.8.
- BNP Paribas USA, Inc., Net income before taxes, Billions of dollars has been revised from -4.3 to -4.6.
- 33 participating firms, Pre-provision net revenue, Billions of dollars has been revised from 363.2 to 362.9.
- 33 participating firms, Net income before taxes, Billions of dollars has been revised from -198.2 to -198.4.

On p. 49, under Figure 18:

- BNP Paribas USA, Inc. changed from 0.7 to 0.6.

On p. 50, under Figure 19:

- BNP Paribas USA, Inc. changed from -3.1 to -3.2.

On p. 74, under Table B.7.A:

- BNP Paribas USA, Inc., CET1 capital ratio (%), Ending has been revised from 11.5 to 11.2.
- BNP Paribas USA, Inc., CET1 capital ratio (%), Minimum has been revised from 11.5 to 11.2.
- BNP Paribas USA, Inc., Tier 1 capital ratio (%), Ending has been revised from 11.5 to 11.2.
- BNP Paribas USA, Inc., Tier 1 capital ratio (%), Minimum has been revised from 11.5 to 11.2.
- BNP Paribas USA, Inc., Total capital ratio (%), Ending has been revised from 13.8 to 13.5.

- BNP Paribas USA, Inc., Total capital ratio (%), Minimum has been revised from 13.8 to 13.5.
- BNP Paribas USA, Inc., Tier 1 leverage ratio (%), Ending has been revised from 6.2 to 6.1.
- BNP Paribas USA, Inc., Tier 1 leverage ratio (%), Minimum has been revised from 6.2 to 6.1.
- BNP Paribas USA, Inc., Risk-weighted assets, Projected 2022:Q3 has been revised from 89.0 to 88.9.
- BNP Paribas USA, Inc., Pre-provision net revenue, Billions of dollars has been revised from 1.1 to 0.8.
- BNP Paribas USA, Inc., Pre-provision net revenue, Percent of average assets has been revised from 0.8 to 0.6.
- BNP Paribas USA, Inc., Net interest income, Billions of dollars has been revised from 5.6 to 5.4.
- BNP Paribas USA, Inc., Net interest income, Percent of average assets has been revised from 3.9 to 3.8.
- BNP Paribas USA, Inc., Noninterest income, Billions of dollars has been revised from 3.7 to 4.0.
- BNP Paribas USA, Inc., Noninterest income, Percent of average assets has been revised from 2.6 to 2.8.
- BNP Paribas USA, Inc., Noninterest expense, Billions of dollars has been revised from 8.2 to 8.6.
- BNP Paribas USA, Inc., Noninterest expense, Percent of average has been revised from 5.8 to 6.1.
- BNP Paribas USA, Inc., Net income before taxes, Billions of dollars has been revised from -3.9 to -4.2.
- BNP Paribas USA, Inc., Net income before taxes, Percent of average has been revised from -2.8 to -2.9.

On p. 75, under Table B.7.B:

- BNP Paribas USA, Inc., CET1 capital ratio (%), Ending has been revised from 11.1 to 10.8.
- BNP Paribas USA, Inc., CET1 capital ratio (%), Minimum has been revised from 11.1 to 10.8.
- BNP Paribas USA, Inc., Tier 1 capital ratio (%), Ending has been revised from 11.1 to 10.8.
- BNP Paribas USA, Inc., Tier 1 capital ratio (%), Minimum has been revised from 11.1 to 10.8.
- BNP Paribas USA, Inc., Total capital ratio (%), Ending has been revised from 13.8 to 13.5.
- BNP Paribas USA, Inc., Total capital ratio (%), Minimum has been revised from 13.8 to 13.5.
- BNP Paribas USA, Inc., Tier 1 leverage ratio (%), Ending has been revised from 6.0 to 5.8.
- BNP Paribas USA, Inc., Tier 1 leverage ratio (%), Minimum has been revised from 6.0 to 5.8.
- BNP Paribas USA, Inc., Risk-weighted assets, Projected 2022:Q3 has been revised from 88.8 to 88.7.
- BNP Paribas USA, Inc., Pre-provision net revenue, Billions of dollars has been revised from 1.0 to 0.8.
- BNP Paribas USA, Inc., Pre-provision net revenue, Percent of average has been revised from 0.7 to 0.6.
- BNP Paribas USA, Inc., Net interest income, Billions of dollars has been revised from 5.6 to 5.5.
- BNP Paribas USA, Inc., Net interest income, Percent of average has been revised from 4.0 to 3.9.
- BNP Paribas USA, Inc., Noninterest income, Billions of dollars has been revised from 3.7 to 3.9.
- BNP Paribas USA, Inc., Noninterest income, Percent of average has been revised from 2.6 to 2.7.
- BNP Paribas USA, Inc., Noninterest expense, Billions of dollars has been revised from 8.3 to 8.6.
- BNP Paribas USA, Inc., Noninterest expense, Percent of average has been revised from 5.8 to 6.1.
- BNP Paribas USA, Inc., Net income before taxes, Billions of dollars has been revised from -4.3 to -4.6.
- BNP Paribas USA, Inc., Net income before taxes, Percent of average has been revised from -3.1 to -3.2.

Contents

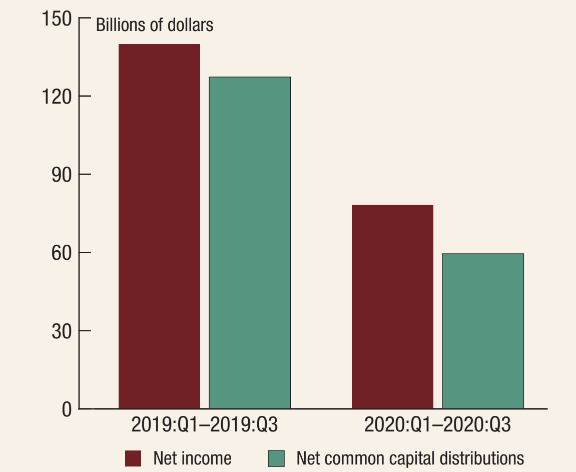
Executive Summary

In June, the Federal Reserve released the results of its annual supervisory stress test[2] and the results of a sensitivity analysis, which assessed the resilience of firms under a range of plausible downside scenarios stemming from the outbreak of the coronavirus and the imposition of associated containment measures ("COVID event").[3] Those results indicated that the banking sector was sufficiently capitalized and could continue lending to businesses and households during a severe recession.

However, material uncertainty was present at the time regarding the trajectory of the economic recovery and its effects on the financial health of banking organizations. As a result, the Board required the 33 firms to resubmit their capital plans and limited the capital distributions by these firms in order to preserve capital and support lending. The Board also announced that it would conduct an additional stress test in late 2020.

Net income declined in 2020 relative to 2019, but firms reduced net common capital distributions and retained more of that income (see figure 1). The decline in capital distributions is partly due to actions taken by the Board to limit capital distributions for the third and fourth quarters of 2020. Combined with firms' voluntary capital distribution reductions, these actions helped to maintain, and slightly increase, aggregate capital levels during a year in which firms also built loss absorbing capacity by more than doubling loan-loss reserves. The aggregate common equity tier 1 capital (CET1) ratio increased from 12.0 percent in the fourth quarter of 2019 to 12.2 percent in the second quarter of 2020 and to 12.7 percent by the third quarter of 2020.

Figure 1. Net income and net common capital distributions



Note: Sample consists of the firms included in the December 2020 stress test.

Source: FR Y-9C.

The results of the December 2020 stress test show that firms maintain strong capital levels under two hypothetical severe scenarios. The scenarios feature severe global downturns with substantial stress in financial markets that serve to capture a broad set of severe but plausible risks.[4] Projected losses under both scenarios exceed $600 billion, considerably larger than in the June 2020 stress test. However, the large reserve buildup during the first half of the year helped cushion some of the increase in losses, and all firms remain above their minimum risk-based capital requirements. Table 1 shows the starting and post-stress minimum ratios for both scenarios in aggregate (see appendix B for the full results for each firm).

Macroeconomic and financial conditions have generally improved since June 2020. Despite these improvements, future economic conditions and the

[2] See Board of Governors of the Federal Reserve System, *Dodd-Frank Act Stress Test 2020: Supervisory Stress Test Results* (Washington: Board of Governors, June 2020), https://www.federalreserve.gov/publications/files/2020-dfast-results-20200625.pdf.

[3] See Board of Governors of the Federal Reserve System, *Assessment of Bank Capital during the Recent Coronavirus Event* (Washington: Board of Governors, June 2020), https://www.federalreserve.gov/publications/files/2020-sensitivity-analysis-20200625.pdf.

[4] See the "Supervisory Scenarios" section below.

Table 1. Aggregate capital ratios, actual, projected 2020:Q3–2022:Q3, and regulatory minimums
Percent

Regulatory ratio	Actual 2020:Q2	Stressed minimum capital ratios		Minimum regulatory capital ratios
		Severely adverse	Alternative severe	
Common equity tier 1 capital ratio	12.2	9.6	9.7	4.5
Tier 1 capital ratio	13.8	11.3	11.4	6.0
Total capital ratio	16.4	14.0	14.1	8.0
Tier 1 leverage ratio	7.9	6.4	6.4	4.0
Supplementary leverage ratio	7.4	5.2	5.2	3.0

Note: The supplementary leverage ratio is calculated only for firms subject to Category I, II, or III standards.

ultimate path of the current recovery remain uncertain, depending on the course of the COVID event. In light of this uncertainty, the Board is extending its limits on capital distributions into the first quarter of 2021, with certain modifications.

In particular, for all firms, the Board will

- continue to limit dividend payments based on recent income, and
- limit share repurchases based on recent income.

These restrictions will apply into the first quarter of 2021 and may be extended by the Board.

Summary of Results

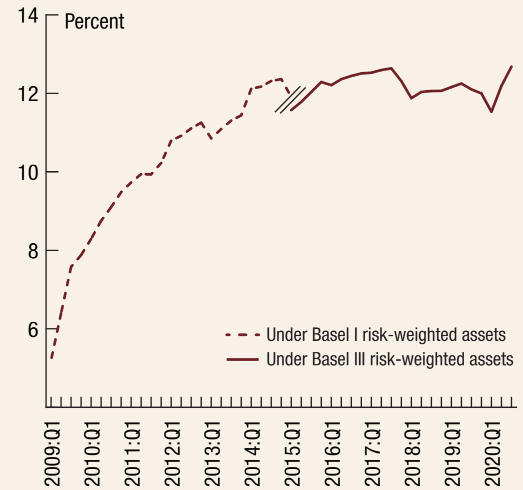
The results of the December stress test suggest that, in the aggregate, the 33 firms would experience substantial losses and lower revenues under the hypothetical recessions but could continue lending to creditworthy businesses and households. This is due, in large part, to the substantial buildup of capital since the 2007–09 financial crisis (see figure 2) and more than a doubling of loan-loss reserves during the first half of 2020. In aggregate, capital ratios remain well above their required minimum levels throughout the projection horizon under both scenarios.

In the severely adverse scenario, the aggregate CET1 ratio falls from an actual value of 12.2 percent in the second quarter of 2020 to a projected minimum of 9.6 percent before rising to 10.2 percent at the end of the third quarter of 2022. In the alternative severe scenario, the aggregate CET1 ratio declines to a minimum of 9.7 percent, but rises to 9.9 percent at the end of the third quarter of 2022. The declines in capital ratios, both in the aggregate and for individual firms, do not include the effect of common stock dividend distributions.

For the December stress test, aggregate losses over the projection horizon at the 33 firms are projected to be $629 billion under the severely adverse scenario and $612 billion under the alternative severe scenario. For the June stress test, total losses under the severely adverse scenario were $550 billion for the same 33 firms.

Despite higher loan losses compared to the June stress test, projected provisions for loan losses are smaller. Provisions are projected to be $429 billion under the severely adverse scenario and $440 billion

Figure 2. Aggregate common equity capital ratio



Note: The Federal Reserve's evaluation of a firm's common equity capital was initially measured using a tier 1 common capital ratio but now is evaluated using a common equity tier 1 capital ratio, which was introduced into the regulatory capital framework with the implementation of Basel III to replace Basel I. Not all of the 33 firms included in the December 2020 stress test reported data for all periods since 2009.

Source: FR Y-9C.

under the alternative severe scenario, while provisions were $489 billion for the June stress test. This difference reflects a significant increase in firms' loan-loss reserves since the beginning of the year. If firms had maintained the same level of loan-loss reserves as in the fourth quarter of 2019, projected provisions would be about $100 billion higher for both scenarios in this stress test.

Lower provisions are offset by lower aggregate projected pre-provision net revenue (PPNR) than in the June stress test. PPNR in the December stress test under the severely adverse scenario and alternative severe scenario is projected to be $371 billion and $363 billion, respectively. For the June stress test, PPNR under the severely adverse scenario was $429 billion for the same 33 firms. These decreases are partly attributable to a flatter yield curve in both scenarios, which reduces net interest margins.

Provisions for loan losses and PPNR are the main drivers of pre-tax net income. Lower projected provisions approximately offset reduced PPNR so that the projected decline in pre-tax net income is similar to that of the June stress test. The projected decline in pre-tax net income is 0.9 percent of average total assets for the severely adverse scenario and 1.1 percent for the alternative severe scenario, compared to a decline of 1.1 percent in the June stress test.

Further details of the results are provided in the "Supervisory Stress Test Results" section of this report, which are presented both in the aggregate and for individual firms.

Comparison to the Sensitivity Analysis

The results from the December stress test, while similar to those of the June stress test, are less severe than the sensitivity analysis results published earlier this year. The sensitivity analysis explored a set of alternative downside scenarios, which were designed in early April and reflected the wide range of projections at the time by professional forecasters for key macroeconomic indicators, such as the unemployment rate and gross domestic product (GDP).

In contrast, the December stress test scenarios were developed as plausible but severe, given the macroeconomic and financial conditions as of September 2020. For example, the unemployment rate in April, when the sensitivity analysis scenarios were designed, was 14.7 percent, and the sensitivity analysis added further stress to that figure; by September, the unemployment rate had declined to 7.9 percent, which was the base to which further stress was added for the December stress test.

Loan losses under the December stress test scenarios are higher compared to the June stress test scenario, but are lower than losses under the alternative downside scenarios in the sensitivity analysis, due to the higher severity of those scenarios. Aggregate projected loan losses under the alternative downside scenarios ranged from around $560 billion to just over $700 billion, compared to $514 billion and $491 billion under the severely adverse and alternative severe scenarios for the December stress test, respectively.

The minimum CET1 ratio fell to between 7.7 and 9.5 percent under the various scenarios considered in the sensitivity analysis. This range is lower than the December stress test's projected minimum ratios of 9.6 and 9.7 percent under the severely adverse and alternative severe scenarios, respectively. The difference is partly attributable to the increase in loan-loss reserves during the first half of 2020.

Overview

This report provides

- details of the supervisory severely adverse and alternative severe scenarios used in the December stress test;
- an overview of the analytical framework and methods used to generate the Federal Reserve's projected results, highlighting several changes from the June stress test;[5]
- additional details about the Federal Reserve's assumptions in this supervisory stress test; and

[5] See Board of Governors of the Federal Reserve System, *Dodd-Frank Act Stress Test 2020: Supervisory Stress Test Methodology* (Washington: Board of Governors, March 2020), https://www.federalreserve.gov/publications/files/2020-march-supervisory-stress-test-methodology.pdf.

- the results of the supervisory stress test under the severely adverse and alternative severe scenarios for the firms that participated in the December stress test, presented both in the aggregate and for individual firms.[6]

[6] The 33 firms that participated in the December stress test are Ally Financial Inc.; American Express Company; Bank of America Corporation; The Bank of New York Mellon Corporation; Barclays US LLC; BMO Financial Corp.; BNP Paribas USA, Inc.; Capital One Financial Corporation; Citigroup Inc.; Citizens Financial Group, Inc.; Credit Suisse Holdings (USA), Inc.; DB USA Corporation; Discover Financial Services; Fifth Third Bancorp; The Goldman Sachs Group, Inc.; HSBC North America Holdings Inc.; Huntington Bancshares Incorporated; JPMorgan Chase & Co.; KeyCorp; M&T Bank Corporation; Morgan Stanley; MUFG Americas Holdings Corporation; Northern Trust Corporation; The PNC Financial Services Group, Inc.; RBC US Group Holdings LLC; Regions Financial Corporation; Santander Holdings USA, Inc.; State Street Corporation; TD Group US Holdings LLC; Truist Financial Corporation; U.S. Bancorp; UBS Americas Holding LLC; and Wells Fargo & Company. In addition to DB USA Corporation, DWS USA Corporation, a second U.S. intermediate holding company subsidiary of Deutsche Bank AG, was required to resubmit its capital plan.

Supervisory Scenarios

On September 17, 2020, the Federal Reserve published the three supervisory scenarios for its December stress test: baseline, severely adverse, and alternative severe.[7] This section describes the severely adverse and alternative severe scenarios that were used for the projections contained in this report. These scenarios were developed using the approach described in the Board's Policy Statement on the Scenario Design Framework for Stress Testing ("Scenario Design Framework").[8] The severely adverse and alternative severe scenarios are not forecasts but rather hypothetical scenarios designed to assess the strength of banking organizations and their resilience to an unfavorable economic environment.

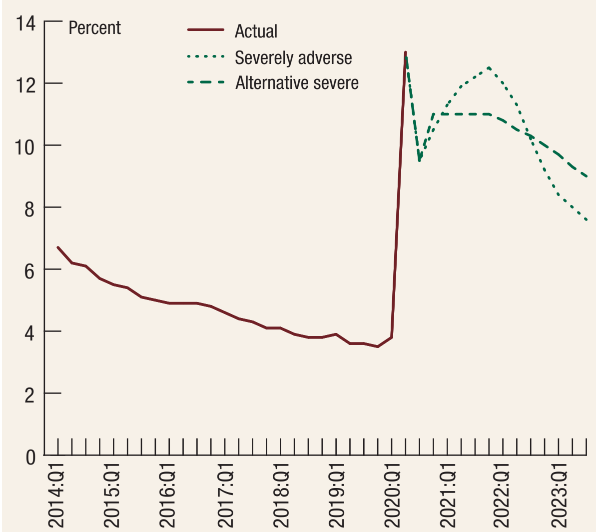
The December supervisory scenarios include trajectories for 28 variables. These include 16 variables that capture economic activity, asset prices, and interest rates in the U.S. economy and financial markets, and an additional three variables (real GDP growth, inflation, and the U.S./foreign currency exchange rate) for each of four foreign country blocs.

Similar to the June stress test, the Federal Reserve applied a global market shock to the trading portfolio of 11 firms with large trading and private equity exposures and a largest counterparty default (LCPD) scenario component to 13 firms with substantial trading, processing, or custodial operations (see "Global Market Shock and Counterparty Default Components").

Severely Adverse Scenario

Figures 3 through 8 illustrate the trajectories for some of the key variables describing U.S. economic activity and asset prices under the severely adverse scenario.

Figure 3. Unemployment rate, 2014:Q1–2023:Q3



Source: Bureau of Labor Statistics for historical data and Federal Reserve assumptions for the supervisory scenarios.

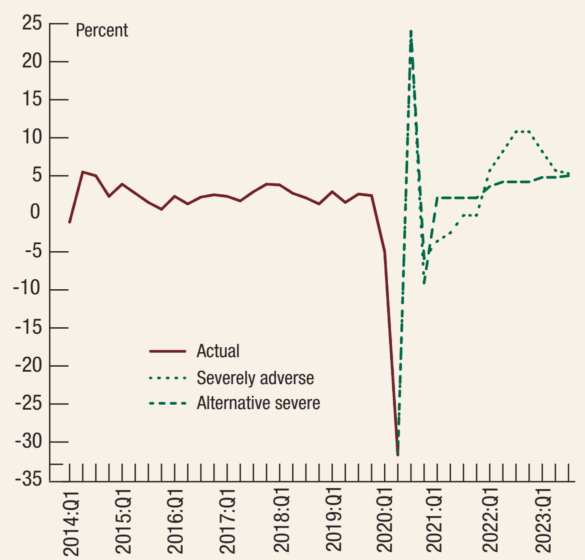
The severely adverse scenario is characterized by a severe decline in global economic activity accompanied by financial market distress. Consistent with the Scenario Design Framework, under the severely adverse scenario, the U.S. unemployment rate climbs to a peak of 12½ percent in the fourth quarter of 2021 (see table A.5), a 3 percentage point increase relative to the initial level, the level in the third quarter of 2020.[9] In line with the increase in the unemployment rate, real GDP falls 3¼ percent from the end of the third quarter of 2020 to its trough in the fourth quarter of 2021. The decline in activity is

7 See Board of Governors of the Federal Reserve System, *Supervisory Scenarios for the Resubmission of Capital Plans in the Fourth Quarter of 2020* (Washington: Board of Governors, September 2020), https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20200917a1.pdf, for additional information and for the details of the supervisory scenarios.

8 See 12 C.F.R. pt. 252, appendix A.

9 The Scenario Design Framework suggests an increase in the unemployment rate in the range between 3 and 5 percentage points from its initial level, with the expectation that the Federal Reserve will select an increase from the lower end of the range when the unemployment rate is already elevated. Given the release of the scenarios late in the third quarter of 2020, the initial level from which the peak unemployment rate in the scenario was computed was based on the forecast from *Blue Chip Economic Indicators* for the third quarter of 2020. See Wolters Kluwer Legal and Regulatory Solutions, *Blue Chip Economic Indicators*.

Figure 4. Real Gross Domestic Product (GDP) growth rate, 2014:Q1–2023:Q3



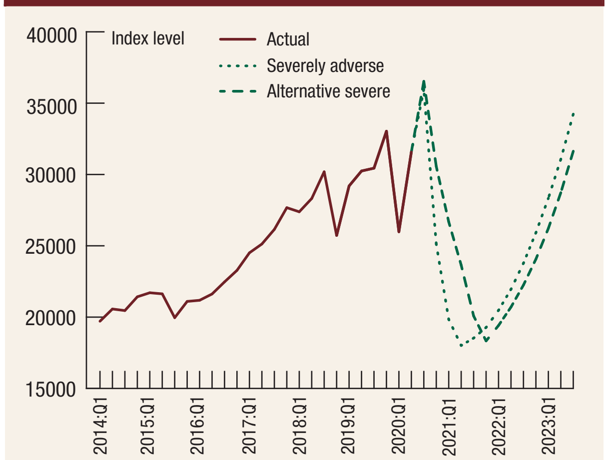
Source: Bureau of Economic Analysis for historical data and Federal Reserve assumptions for the supervisory scenarios.

accompanied by a lower headline consumer price index (CPI) inflation rate, which quickly falls to an annual rate of about 1¼ percent in the fourth quarter of 2020, and then ranges from 1¼ percent to about 2¼ percent in the remaining quarters.

In the later quarters of the scenario, the unemployment rate declines at a pace comparable with the paths of severely adverse scenarios used in previous stress testing cycles. Over the scenario period, despite the reduction in the unemployment rate, the level of real GDP does not rise above the level in the baseline scenario.

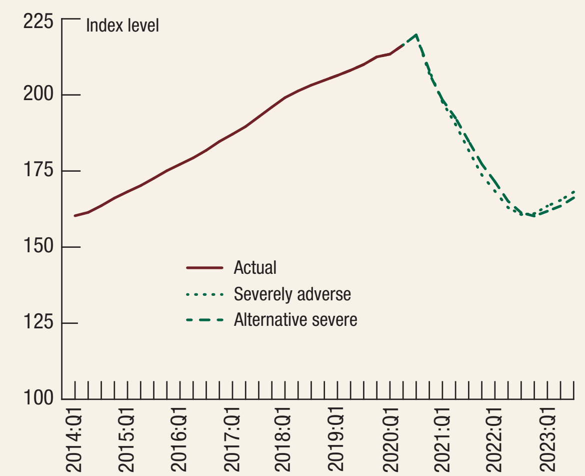
Consistent with the severe decline in real activity, the interest rate for 3-month Treasury bills remains near zero throughout the scenario period. The 10-year Treasury yield rises gradually from about ¼ percent during the fourth quarter of 2020 to about 1½ percent by the end of the scenario period. The result is a steepening of the yield curve over the scenario period.

Figure 5. Dow Jones Total Stock Market Index, 2014:Q1–2023:Q3



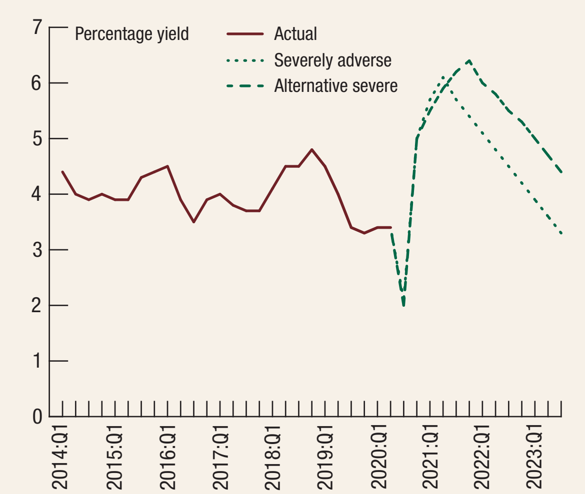
Source: Dow Jones for historical data and Federal Reserve assumptions for the supervisory scenarios.

Figure 6. National House Price Index, 2014:Q1–2023:Q3



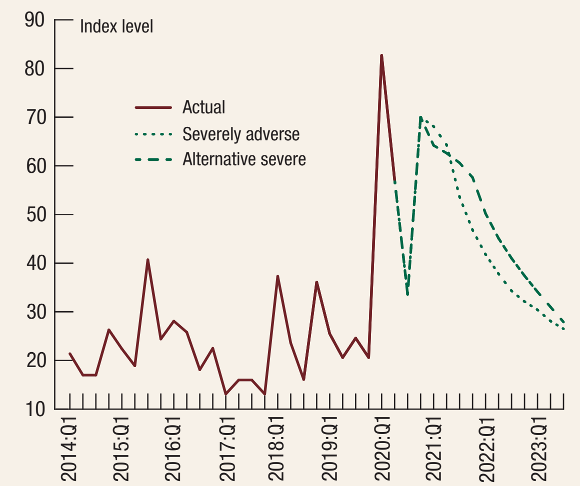
Source: CoreLogic for historical data (seasonally adjusted by Federal Reserve) and Federal Reserve assumptions for the supervisory scenarios.

Figure 7. U.S. BBB corporate yield, 2014:Q1–2023:Q3



Source: ICE Data Indices, LLC, used with permission for historical data and Federal Reserve assumptions for the supervisory scenarios.

Figure 8. U.S. Market Volatility Index (VIX), 2014:Q1–2023:Q3



Source: Chicago Board Options Exchange for historical data (converted to quarterly by Federal Reserve using the maximum quarterly close-of-day value) and Federal Reserve assumptions for the supervisory scenarios.

Financial conditions in corporate and real estate lending markets are stressed significantly. The spread between yields on investment-grade corporate bonds and yields on long-term Treasury securities widens to almost 5¾ percentage points before narrowing to about 1¾ percentage points at the end of the scenario period. The spread between mortgage rates and 10-year Treasury yields widens to about 3½ percentage points early in 2021 before gradually falling to about 1¾ percentage points by the end of the scenario.

Asset prices drop sharply in this scenario. Equity prices decline more than 30 percent from the third to the fourth quarter of 2020, as the economy contracts sharply, and the U.S. Market Volatility Index (VIX) rises to a peak level of 70. Equity prices continue to fall in the first half of 2021 before gradually recovering, leaving them down about 23 percent for the year. They continue to recover but close the scenario period down about 4¾ percent from their value in the initial quarter. House prices and commercial real estate (CRE) prices also experience large declines. House prices fall about 26¾ percent from the third quarter of 2020 to the third quarter of 2022; from that trough, they rise about 4½ percent during the rest of the scenario period. CRE prices decline 30 percent from the third quarter of 2020 to the fourth quarter of 2022 and stay close to that level for the remainder of the scenario period.

The international component of this scenario features sharp slowdowns in all developed country blocs, leading to recessions in the euro area, the United Kingdom, and Japan. Developing Asia has only a mild slowdown in economic activity in the scenario. With the continued weakness in economic activity, all of the foreign economies included in the scenario experience sizable declines in their inflation rates during the scenario period. The U.S. dollar appreciates against the euro, the pound sterling, and the currencies of developing Asia, but depreciates slightly against the yen, reflecting flight-to-safety capital flows.

Additional Key Features of the Severely Adverse Scenario

Stresses in the corporate loan market were assumed to be more intense for lower-rated firms. Declines in aggregate U.S. residential and CRE prices were assumed to be concentrated in regions that have experienced rapid price gains over the past two years. Declines in prices of U.S. housing and CRE were also assumed to be representative of risks to house prices and CRE prices in foreign regions and economies that have experienced rapid price gains over the past two years. Moreover, conditions across Latin American economies were assumed to be comparable to the sharp slowdown in the United States.

Comparison of the Current Severely Adverse Scenario and the June 2020 Severely Adverse Scenario

The severely adverse scenario features a smaller increase in the unemployment rate in the United States compared with the June severely adverse scenario. However, the current severely adverse scenario starts from a significantly higher unemployment rate, reflecting current economic conditions. The smaller increase in the unemployment rate reflects the Scenario Design Framework, which calls for a smaller increase in the unemployment rate when the unemployment rate is already elevated.

As of September 10, 2020, the consensus forecast from *Blue Chip Economic Indicators* had an unemployment rate of 9½ percent in the third quarter of 2020.[10] Given the weak initial economic conditions, the Scenario Design Framework calls for a 3 percent-

[10] See Wolters Kluwer Legal and Regulatory Solutions, *Blue Chip Economic Indicators*.

age point increase in the unemployment rate. Accordingly, the unemployment rate in the current severely adverse scenario reaches a peak of 12½ percent. Interest rates rise in the current scenario, given their low starting values, whereas they fell in the June scenario. Asset price declines are comparable with the declines in the June scenario.

Alternative Severe Scenario

This alternative scenario is consistent with a number of potential adverse events, including a series of second waves of the COVID event that are not synchronized across different regions of the United States and the rest of the world, and related structural changes in labor markets. Accordingly, the alternative severe scenario is characterized by a less-severe initial drop in global economic activity relative to the severely adverse scenario, and a subsequent recovery that is more sluggish. Financial market stress is comparable with the stress assumed in the severely adverse scenario. The alternative severe scenario is designed to assess the strength and resilience of banking organizations to an alternative set of unfavorable economic conditions and is not a Federal Reserve forecast.

Under the alternative severe scenario, the U.S. unemployment rate climbs to a peak of about 11 percent in the fourth quarter of 2020 (see table A.7). This 1½ percentage point increase in the unemployment rate departs from the Scenario Design Framework, which would call for the unemployment rate to rise at least 3 percentage points and to peak between the sixth and the eighth quarter of the scenario.[11] The unemployment rate stays at its 11 percent peak through the fourth quarter of 2021. By that quarter, the unemployment rate is about 4½ percentage points higher than in the baseline scenario, but 1½ percentage points lower than in the severely adverse scenario. However, by the end of the scenario period, the relationship with the severely adverse scenario is reversed: the unemployment rate in the alternative severe scenario is 9 percent in the third quarter of 2023, about 1½ percentage points higher than in the severely adverse scenario.

Consistent with the increase in the unemployment rate, real GDP falls at an annualized rate of 9 percent in the fourth quarter of 2020 and then rises about 2 percent in 2021. Real GDP growth picks up over the remainder of the scenario period. The decline in activity is accompanied by a lower headline CPI inflation rate, which quickly falls to an annual rate of about 1 percent in the fourth quarter of 2020, and then is relatively steady over the rest of the 13-quarter period, ranging from 1¾ to 2¼ percent.

In line with the prolonged weakness in real activity, the interest rate for 3-month Treasury bills remains near zero throughout the scenario, which is identical to the path assumed in the severely adverse scenario. The 10-year Treasury yield rises gradually from ¼ percent during the third quarter of 2020 to 1¾ percent by the end of the scenario period. The result is a slightly greater steepening of the yield curve over the scenario period than in the severely adverse scenario.

Financial conditions in corporate and real estate lending markets are stressed significantly. The spread between yields on investment-grade corporate bonds and yields on long-term Treasury securities widens gradually to about 5¾ percentage points in the third quarter of 2021 before falling to 2¾ percentage points at the end of the scenario period, an increase of 1 percentage point relative to the third quarter of 2020 and ¾ percentage point higher than assumed in the severely adverse scenario. The spread between mortgage rates and 10-year Treasury yields widens to about 3¼ percentage points in the fourth quarter of 2020; it remains near this level through the fourth quarter of 2021 before gradually declining, and reaches 2 percentage points at the end of the scenario period. This end point is ¼ percentage point higher than in the severely adverse scenario, reflecting the persistently weaker level of activity assumed in this alternative scenario.

Asset prices drop sharply in this scenario. Equity prices remain depressed longer than in the severely adverse scenario, bottoming out at the end, rather than the middle, of 2021. They fall about 16¼ percent from the third to the fourth quarter of 2020 as the economy contracts; this decline in equity prices is accompanied by a rise in the VIX, which reaches a peak of 70. Equity prices continue to fall through 2021, and at the end of 2021 are almost 50 percent lower than in the third quarter of 2020. They recover through the rest of the scenario period and end the scenario down about 13½ percent from the third

[11] The approach described in the Scenario Design Framework includes the ability to incorporate salient risks, as might be required by unusual economic circumstances. Accordingly, the alternative severe scenario is characterized by a less-severe initial increase in the U.S. unemployment rate than called for by the Scenario Design Framework, but this increase is also more persistent.

quarter of 2020. The VIX gradually decreases to 28 by the end of the scenario period. House prices and CRE prices also experience large overall declines. House prices fall 27 percent through the fourth quarter of 2022 and recover 3¾ percent through the rest of the scenario period, a path of house prices similar to the path in the severely adverse scenario. CRE prices decline 30 percent through the end of 2022 and stay close to that level for the remainder of the scenario, a path that matches the one in the severely adverse scenario.

In line with domestic developments, the international component of this scenario features a less-severe initial contraction in global economic activity than in the severely adverse scenario, but a less-robust recovery thereafter. With the continued weakness in economic activity, all of the foreign economies included in the scenario experience sizable declines in their inflation rates during the scenario period. As in the severely adverse scenario, the U.S. dollar initially appreciates against the euro, the pound sterling, and the currencies of developing Asia, but depreciates slightly against the yen, consistent with flight-to-safety capital flows.

Additional Key Features of the Alternative Severe Scenario

Stresses in the corporate loan market were assumed to be more intense for lower-rated firms. Declines in aggregate U.S. residential and CRE prices were assumed to be concentrated in regions that have experienced rapid price gains over the past two years. Declines in prices of U.S. housing and CRE were also assumed to be representative of risks to house prices and CRE prices in foreign regions and economies that have experienced rapid price gains over the past two years. Moreover, conditions across Latin American economies were assumed to be comparable to the sharp slowdown in the United States.

Comparison of the Alternative Severe Scenario and the Sensitivity Analysis Alternative Downside Scenarios

In June 2020, the Federal Reserve used several scenarios for additional sensitivity analysis to explore vulnerabilities of firms related to the COVID event.[12] The sources of stress considered in the alternative severe scenario are comparable to those for the W- and U-shaped scenarios for the sensitivity analysis released in June, albeit the rise in the unemployment rate envisaged in the new scenario is smaller but more persistent. These changes in the peak of the unemployment rate in the alternative severe scenario are in line with revisions to the forecasts of professional forecasters since June. Data released for the end of the second quarter and the first part of the third quarter of 2020 have generally led professional forecasters to revise downward the level of the unemployment rate expected to prevail during the remainder of 2020 and have significantly compressed the range of forecasts.

Comparison of the Alternative Severe Scenario and the June 2020 Severely Adverse Scenario

The June severely adverse scenario was designed and published before the onset of the COVID event. The alternative severe scenario features a smaller increase in the unemployment rate in the United States compared with the June severely adverse scenario. However, the alternative severe scenario starts from a significantly higher unemployment rate, reflecting current economic conditions. The relatively smaller increase in the unemployment rate departs from the Scenario Design Framework, which would call for the unemployment rate to rise at least 3 percentage points and to peak between the sixth and the eighth quarter of the scenario. Moreover, the unemployment rate remains near its peak for a greater number of periods. On the financial side, asset price declines are broadly consistent with those in the June scenario.

Global Market Shock and Counterparty Default Components

The global market shock is a set of hypothetical shocks to a large set of risk factors reflecting general market distress and heightened uncertainty. Firms with significant trading activity must consider the global market shock and recognize associated losses in the first quarter of the projection period. In addition, certain large and highly interconnected firms must apply the same global market shock when projecting losses under the LCPD scenario component.[13] The global market shock is applied to asset positions held by the firms on a given as-of date. The

[12] The scenarios in that sensitivity analysis had a more rapid and more pronounced increase in the unemployment rate than what is suggested by the Scenario Design Framework.

[13] All firms that were subject to the global market shock and LCPD components for the June stress test are also subject to the same components for the December stress test.

as-of date for the December stress test global market shock is June 30, 2020. These shocks do not represent a forecast of the Federal Reserve.

The design and specification of the global market shock differ from those for the macroeconomic scenarios for several reasons. First, profits and losses from trading and counterparty credit are measured in mark-to-market terms, while revenues and losses from traditional banking are generally measured using the accrual method. Another key difference is the timing of loss recognition: the global market shock affects the mark-to-market value of trading positions and counterparty credit losses in the first quarter of the projection horizon; this timing is based on an observation that market dislocations can happen rapidly and unpredictably under stress conditions. Applying the global market shock in the first quarter of the projection horizon ensures that potential losses from trading and counterparty exposures are incorporated into trading firms' capital ratios at all points over the projection period.

The global market shock component is specified by a large set of risk factors that include, but are not limited to,

- equity prices of key developed markets and developing and emerging market nations to which trading companies may have exposure, along with selected points along term structures of implied volatilities;
- foreign exchange rates of most major and some minor currencies, along with selected points along term structures of implied volatilities;
- selected-maturity sovereign debt yields (e.g., Treasury yields), swap rates, and other key rates for key developed markets and for developing and emerging market nations to which trading companies may have exposure;
- selected maturities and expiries of implied volatilities that are key inputs to the pricing of interest rate derivatives;
- selected expiries of futures prices for energy products, including crude oil (differentiated by country of origin), natural gas, and power;
- selected expiries of futures prices for metals and agricultural commodities; and
- credit spreads or prices for selected credit-sensitive products, including corporate bonds, credit default swaps, and loans by risk; non-agency residential mortgage-backed securities and commercial mortgage-backed securities by risk and vintage; sovereign debt; and municipal bonds.

The Federal Reserve considers emerging and ongoing areas of financial market vulnerability in the development of the global market shock. This assessment of potential vulnerabilities is informed by financial stability reports; supervisory information; and internal and external assessments of potential sources of distress such as geopolitical, economic, and financial market events.

The global market shock includes a standardized set of risk-factor shocks to financial market variables that apply to all firms with significant trading activity. Depending on the type of financial market vulnerabilities that the global market shock assesses, the market shocks could be based on a single historical episode, multiple historical periods, hypothetical (but plausible) events that are based on salient risks, or a hybrid approach comprising some combination of historical episodes and hypothetical events. A market shock based on hypothetical events may result in changes in risk factors that were not previously observed.

Risk-factor shocks are calibrated based on assumed time horizons. The calibration horizons reflect a number of considerations related to the scenario being modeled. One important consideration is the liquidity characteristics of different risk factors, which vary based on the specified market shock narrative. More specifically, calibration horizons reflect the variation in the speed at which trading companies could reasonably close out, or effectively hedge, risk exposures in the event of market stress. The calibration horizons are generally longer than the typical time needed to liquidate assets under normal conditions because they are designed to capture the unpredictable liquidity conditions that prevail in times of stress, among other factors.[14] For example, more-liquid asset classes, such as interest rates, foreign exchange, or public equities, are calibrated to shorter horizons, such as three months, while less-liquid assets, such as non-agency securitized products or private equities, have longer calibration horizons, such as 12 months.

[14] Markets that are well-functioning and that appear to be very liquid can undergo abrupt changes in times of financial stress, and the timing and severity of changes in market liquidity may diverge from historical experience. For example, prior to the 2007–09 financial crisis, AAA-rated private-label residential mortgage-backed securities would likely have been considered highly liquid, but their liquidity deteriorated drastically during the crisis period.

Severely Adverse and Alternative Severe Scenarios

Both the severely adverse and alternative severe scenarios include the same global market shock component, which incorporates widespread corporate defaults, ratings downgrades, severe declines in equity values, and increases in equity-implied volatility resulting from a worsening recession.

Spreads widen sharply for non-investment grade and lower-rated investment grade bonds as ratings-sensitive investors anticipate further downgrades and sell assets. Similarly, the leveraged loan market comes under considerable pressure from decreased demand. Open-ended mutual funds and exchange-traded funds (ETFs) that hold leveraged loans and high-yield bonds face heavy redemptions. Due to liquidity mismatches, mutual fund and ETF managers sell their most liquid holdings, leading to more extensive declines in the prices of fixed-income securities and other related assets. Price declines on leveraged loans flow through to the prices for collateralized loan obligations (CLOs). CLO prices suffer severe corrections associated with the devaluation of the underlying collateral and selling by concentrated holders desiring to reduce risk.

The broad selloff of corporate bonds and leveraged loans spills over to prices for other risky credit and private equity instruments. Credit spreads for emerging market corporate credit and sovereign bonds widen due to a fall in risk appetite and flight-to-safety considerations. Asset values for private equity experience sizable declines as leveraged firms face lower earnings and a weak economic outlook. Municipal bond spreads widen in line with lower municipal tax revenues associated with the severe weakening of the U.S. economy.

Given the current low level of short-term interest rates, short-term Treasury rates fall only slightly in this scenario. Longer-term Treasury rates fall as a result of flight-to-safety flows, but by a modest amount given the already-low interest rate environment. Short-term U.S. interbank lending rates rise as firms face increased funding pressure from a pullback in overnight lending, while longer-term swap rates fall in line with the declines in long-term Treasury rates.

Flight-to-safety considerations cause the U.S. dollar to appreciate somewhat against the currencies of most advanced economies, with the Japanese yen as a notable exception. The yen appreciates against the U.S. dollar as investors view the yen as a safe-haven currency. Flight-to-safety considerations cause precious metals to experience an increase in value while non-precious metals prices fall as a result of lower demand that in turn results from global economic weakness.

Comparison to the June 2020 Severely Adverse Scenario

The global market shock component is broadly consistent with the June severely adverse scenario as both emphasize a heightened stress to highly leveraged markets that causes CLOs and private equity investments to experience large market value declines. Moreover, there is a general rise in short-term interbank lending rates, highlighting a severe increase in funding pressures. A key difference is a milder decline in Treasury rates, which reflects that policy rates are now closer to zero. Shocks to equity values and short-term equity implied volatility are substantially larger. Energy price declines and related volatility increases are more pronounced, in general. The Swiss franc depreciates instead of appreciates against the U.S. dollar. Finally, stresses in the municipal bond market are more severe.

Comparison to the Sensitivity Analysis Alternative Downside Scenarios

The global market shock component reflects themes similar to those highlighted in the sensitivity analysis alternative downside scenarios. Key differences include a milder decline in Treasury rates, which reflects that policy rates are now closer to zero. Sovereign credit spreads widen less severely, particularly in the European periphery. In addition, changes to agency option-adjusted spreads are more modest given the increase in spread levels since the as-of date of the sensitivity analysis alternative downside scenarios.

Counterparty Default Component for the Supervisory Severely Adverse and Alternative Severe Scenarios

Firms with substantial trading or custodial operations are required to incorporate a LCPD scenario component for the resubmission of capital plans in the fourth quarter of 2020. The LCPD scenario component involves the instantaneous and unexpected default of the firm's largest counterparty.[15]

In connection with the LCPD scenario component, these firms are required to estimate and report the potential losses and related effects on capital associated with the instantaneous and unexpected default of the counterparty that would generate the largest losses across their derivatives and securities financing activities, including securities lending and repurchase or reverse repurchase agreement activities. The LCPD scenario component is an add-on to the macroeconomic conditions and financial market environments specified in the supervisory severely adverse and alternative severe scenarios.

The largest counterparty of each firm is determined by net stressed losses. Net stressed losses are estimated by applying the global market shock to revalue non-cash securities financing transactions (SFTs) (securities or collateral posted or received); and, for derivatives, the trade position and non-cash collateral exchanged. The as-of date for the December stress test LCPD scenario component is June 30, 2020—the same date as for the global market shock.[16]

[15] In selecting its largest counterparty, a firm subject to the LCPD component will not consider certain sovereign entities (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) or qualifying central counterparties (QCCP). See definition of QCCP at 12 C.F.R. § 217.2.

IHCs are not required to include any affiliate of the U.S. IHC as a counterparty. As in the U.S. final rule pursuant to the Dodd–Frank Act for Single Counterparty Credit Limits, an affiliate of the company includes a parent company of the counterparty, as well as any other firm that is consolidated with the counterparty under applicable accounting standards, including U.S. generally accepted accounting principles (GAAP) or International Financial Reporting Standards.

[16] As with the global market shock, losses will be assumed to occur in the first quarter of the projection horizon.

Box 1. Macroeconomic and Financial Conditions

Since the Federal Reserve published the June stress test and sensitivity analysis results in the second quarter, macroeconomic and financial conditions have generally improved. Domestic and global policymakers responded to the deterioration in economic conditions with extraordinary measures to stabilize markets; to bolster the flow of credit to households, businesses, and communities; and to ensure that firms would remain resilient. The unemployment rate in the United States, which had been at a 50-year low at the start of 2020, soared to a post-war high of 14.7 percent in April before declining to 6.7 percent in November.[1] However, future economic conditions remain unusually uncertain as prospects for many businesses and unemployed workers largely depend on the course of the COVID event.

Banking Sector

The COVID event continues to affect the banking sector through its effects on business and household borrowing, leverage, earnings, and liquidity. Corporate borrowing rose sharply in the first half of the year along with a corresponding decline in business revenues to service those liabilities. Within CRE, vacancy rates increased over the same period as retail, office, and hotel properties exhibited the highest vulnerability. Household debt was moderate relative to income at the beginning of the year, but a further increase in unemployment may negatively affect households' abilities to repay that debt. In some cases, certain severely affected sectors are particularly vulnerable to additional outbreaks or lockdowns.[2]

Market functioning has improved and asset valuations have generally increased since the second quarter, partly due to policy actions, including asset repurchases and facilities set up under section 13(3) of the Federal Reserve Act. Nominal Treasury yields are at historically low levels, reflecting cautious expectations for economic growth and the Federal Reserve's monetary policy stance. During the most severe periods of stress in March and April, spreads on corporate bonds over comparable-maturity Treasury securities widened to their highest daily levels since the financial crisis. Leveraged loan spreads also widened in March and April, particularly for lower-rated loans. Since then, spreads declined substantially but remain quite elevated in heavily affected industries, such as in energy, airline, and leisure.

Firm earnings severely contracted in the first half of the year due to an increase in loan loss provisions, current expected credit loss methodology (CECL) implementation, and decreased net interest margins. These downward pressures on earnings were partly offset by an increase in trading revenues for the largest firms as market-making and investment banking fee income increased. The second and third quarter surge in deposit inflows and the large buildup of reserve balances associated with the Federal Reserve's large-scale asset purchases helped firms manage liquidity pressures and reduce funding risk.

Firms started the year with strong levels of capital and have maintained them throughout 2020, despite a slight dip in the first quarter. Firms have also shored up their capital substantially since the 2007–09 financial crisis, supported by post-crisis regulatory reforms including stress testing.

Uncertainty Remains

Despite the rebound in economic activity and improving investor sentiment, uncertainty around the course of the COVID event remains high. This uncertainty reflects the possibility of continued virus outbreaks, future lockdown measures, and delays in vaccine production or distribution. While fiscal stimulus and loss mitigation programs provided to date have been a stabilizing factor for households and businesses,[3] many households and businesses could face significant pressures if the COVID event worsens.

[1] See U.S. Bureau of Labor Statistics (BLS), Unemployment Rate, https://fred.stlouisfed.org/series/UNRATE.

[2] The unemployment rate in leisure and hospitality increased to 15.0 percent in November from 4.9 percent a year earlier. Overall nonagricultural private employment saw a smaller increase from 3.2 to 6.5 percent over the same period. See BLS, The Employment Situation - November 2020, https://www.bls.gov/news.release/archives/empsit_12042020.htm.

[3] Scott R. Baker, R. A. Farrokhnia, Steffen Meyer, Michaela Pagel, and Constantine Yannelis, "Income, Liquidity, and the Consumption Response to the 2020 Economic Stimulus Payments," NBER Working Paper No. 27097 (Cambridge: National Bureau of Economic Research, May 2020), https://www.nber.org/papers/w27097.

Supervisory Stress Test Framework and Model Methodology

Overview of Modeling Framework

The Federal Reserve estimates the effect of supervisory scenarios on the regulatory capital ratios of firms participating in the supervisory stress test by projecting net income and other components of regulatory capital for each firm over a nine-quarter projection horizon. Projected net income, adjusted for the effect of taxes, is combined with non-common capital action assumptions and other components of regulatory capital to produce post-stress capital ratios. The Federal Reserve's approach to modeling post-stress capital ratios generally follows U.S. generally accepted accounting principles (GAAP) and the regulatory capital framework.[17] Figure 9 illustrates the framework used to calculate changes in net income and regulatory capital.

Figure 9. Projecting net income and regulatory capital

Net interest income + noninterest income – noninterest expense
= pre-provision net revenue (PPNR)

Note: PPNR includes income from mortgage servicing rights and losses from operational-risk events and other real-estate owned (OREO) costs.

↓

PPNR + other revenue – provisions for credit losses* –
Available-for-sale (AFS) and Held-to-maturity (HTM) securities losses* –
Held for sale (HFS) and Fair-value option (FVO) loan losses –
trading and counterparty losses
= pre-tax net income

Note: Change in the allowances for credit losses + net charge-offs
= provisions for credit losses

↓

Pre-tax net income – taxes – income attributable to minority interest
– change in the valuation allowance
= after-tax net income

↓

After-tax net income – payments on non-common capital +
other comprehensive income (OCI)
= change in equity capital

↓

Change in equity capital –
change in adjustments and deductions from regulatory capital +
other additions to regulatory capital
= change in regulatory capital

*For firms that have adopted Accounting Standards Update (ASU) 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses, in accordance with Financial Accounting Standards Board (FASB), *Financial Instruments–Credit Losses* (Topic 326), FASB ASU 2016-13 (Norwalk, Conn.: FASB, June 2016).

Projecting Pre-tax Net Income

The Federal Reserve calculates projected pre-tax net income for the firms subject to the supervisory stress test by combining projections of revenue, expenses, provisions for credit losses, and other losses, including

- PPNR;
- provisions for credit losses;
- losses on loans held for sale (HFS) or for investment and measured under the fair-value option (FVO);
- credit losses on investment securities in the available-for-sale (AFS) and held-to-maturity (HTM) portfolios;[18]
- losses on market risk exposures, credit valuation adjustment (CVA), and incremental default risk (IDR) for firms subject to the global market shock; and
- losses from a default of the largest counterparty for firms with substantial trading, processing, or custodial operations.

The Federal Reserve projects these components of pre-tax net income using supervisory models that

[17] See 12 C.F.R. pt. 217.

[18] For firms that have adopted Accounting Standards Update (ASU) 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses, in accordance with Financial Accounting Standards Board (FASB), *Financial Instruments–Credit Losses* (Topic 326), FASB ASU 2016-13 (Norwalk, Conn.: FASB, June 2016).

take the Board's scenarios and firm-provided data as inputs. The projections are based on the assumption that firms' balance sheets remain unchanged throughout the projection period. Macroeconomic variables used in select supervisory models vary across geographic locations (e.g., by state or by county). The Federal Reserve projects the paths of these variables as a function of aggregate macroeconomic variables included in the Board's scenarios.

Pre-provision Net Revenue

PPNR is defined as net interest income (interest income minus interest expense) plus noninterest income minus noninterest expense. Consistent with U.S. GAAP, the projection of PPNR includes projected losses due to operational-risk events and expenses related to the disposition of real-estate-owned properties.[19]

The Federal Reserve models most components of PPNR using a suite of models that generally relate specific revenue and non-provision-related expenses to the characteristics of firms and to macroeconomic variables. These include eight components of interest income, seven components of interest expense, six components of noninterest income, and three components of noninterest expense.

The Federal Reserve separately models losses from operational risk and other real-estate-owned (OREO) expenses. Operational risk is defined as "the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events."[20] OREO expenses are those expenses related to the disposition of real-estate-owned properties and stem from losses on first-lien mortgages.

Loan Losses and Provisions on the Accrual Loan Portfolio

The Federal Reserve projects 13 quarters of losses on loans in the accrual loan portfolio using one of two modeling approaches: the expected-loss framework or the net charge-off approach.

For certain loans, expected losses under the macroeconomic scenario are estimated by projecting the probability of default (PD), loss given default (LGD), and exposure at default (EAD) for each quarter of the projection horizon. Expected losses in each quarter are the product of these three components.

Losses are modeled under the expected-loss framework for the following loan categories:

- corporate loans, including graded commercial and industrial (C&I) loans, agricultural loans, domestic farm loans, international farm loans, loans to foreign governments, loans for purchasing and carrying securities, other non-consumer loans, and other leases
- CRE loans, including domestic and international non-owner-occupied multifamily or nonfarm, nonresidential property loans and construction and land development loans
- domestic first-lien residential mortgages
- domestic home equity loans (HELs) and home equity lines of credit (HELOCs)
- domestic credit cards
- domestic auto loans

The net charge-off approach projects losses over the projection horizon using models that capture the historical behavior of net charge-offs as a function of macroeconomic and financial market conditions and loan portfolio characteristics. The Federal Reserve models losses under the net charge-off approach for other consumer loans, business and corporate credit card loans, small-business loans, student loans, and international retail loans.

Losses on the accrual loan portfolio flow into net income through provisions for loan and lease losses. Generally, provisions for loan and lease losses for each quarter equal projected loan losses for the quarter plus the change in the allowance needed to cover the subsequent four quarters of expected loan losses, taking into account the allowance established by the firm as of the effective date of the stress test.[21]

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[19] PPNR projections do not include debt valuation adjustments, which are not included in regulatory capital.

[20] See Basel Committee on Banking Supervision, *International Convergence of Capital Measurement and Capital Standards* (Basel, Switzerland: BCBS, June 2004), 149, https://www.bis.org/publ/bcbs107.pdf.

[21] To reduce uncertainty, allow for better capital planning at affected firms, and gather additional information on the impact of CECL, the Federal Reserve maintained the framework used prior to the adoption of CECL for calculating allowances on loans in the December stress test, and plans to do so for 2021. See Board of Governors of the Federal Reserve System, "Statement on the Current Expected Credit Loss Methodology (CECL) and Stress Testing," press release, December 21, 2018, https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20181221b1.pdf.

The Federal Reserve assumes that the allowance at the end of each quarter covers projected loan losses for four quarters into the future. The supervisory estimate of the allowance at the start of the projection horizon, which is based on projected losses, may differ from a firm's established allowance at the beginning of the projection horizon, which is based on the firm's estimate of losses on the effective date of the stress test. Any difference between the supervisory calculation of the allowance and the firm's reported allowance at the beginning of the projection horizon is linearly smoothed into the Federal Reserve's provisions projection over the nine quarters.

Losses on Loans Measured on a Fair-Value Basis

Certain loans are accounted for on a fair-value basis instead of on an accrual basis. For example, if a loan is accounted for using the FVO, it is marked to market, and the accounting value of the loan changes as market risk factors and fundamentals change. Similarly, loans that are HFS are accounted for at the lower of cost or market value.

The models for these asset classes project gains and losses on the firms' FVO/HFS loan portfolios over the nine-quarter projection horizon, net of any hedges, by applying the scenario-specific path of interest rates and credit spreads to loan yields.

Losses are modeled under this approach for the following loan categories:

- FVO/HFS C&I loans
- FVO/HFS CRE loans
- FVO/HFS residential mortgages, student loans, auto loans, and credit cards

Gains and losses on HFS C&I and CRE loans are estimated using a model specific to those asset classes. Gains and losses on FVO/HFS retail loans are modeled separately.

Losses on Securities in the Available-for-Sale and Held-to-Maturity Portfolios

The Federal Reserve estimates two types of losses on AFS or HTM securities related to investment activities.[22] First, for securities classified as AFS, projected changes in the fair value of the securities due to changes in interest rates and other factors will result in unrealized gains or losses that are recognized in capital for some firms through other comprehensive income (OCI).[23] Second, credit losses on the security may be recorded. With the exception of certain government-backed obligations, both AFS and HTM securities are at risk of incurring credit losses.[24] The models project security-level credit losses, using as an input the projected fair value for each security over the nine-quarter projection horizon under the macroeconomic scenarios.

Securities at risk of credit losses include the following securitizations and direct debt obligations:

- corporate debt securities
- sovereign debt securities (other than U.S. government obligations)
- municipal debt securities
- mortgage-backed, asset-backed, CLO, and collateralized debt obligation (CDO) securities

Gains or Losses on the Fair Value of Available-for-Sale Securities

The fair value of securities in the AFS portfolio may change in response to the macroeconomic scenarios. Under U.S. GAAP, unrealized gains and losses on AFS securities are reflected in accumulated OCI (AOCI) but do not flow through net income.[25] Under the regulatory capital rule, AOCI must be incorporated into CET1 for certain firms.[26] The incorporation of AOCI in regulatory capital is described in "Calculation of Regulatory Capital Ratios" below.

[22] This portfolio does not include securities held for trading. Losses on these securities are projected by the model that projects gains and losses on trading exposures.

[23] OCI is accounted for outside of net income. Under regulatory capital rules, accumulated OCI (AOCI) that arises from unrealized changes in the value of AFS securities must be incorporated into CET1 for firms subject to the advanced approaches and other firms that do not opt out of including AOCI in regulatory capital.

[24] Certain government-backed securities, such as U.S. Treasuries, U.S. government agency obligations, U.S. government agency or government-sponsored enterprise mortgage-backed securities, Federal Family Education Loan Program student loan asset-backed securities, and pre-refunded municipal bonds, are assumed not to be subject to credit losses.

[25] Unrealized gains and losses on equity securities are recognized in net income and affect regulatory capital for all firms. See FASB, *Financial Instruments—Overall* (Subtopic 825-10), FASB ASU 2016-01 (Norwalk, Conn.: FASB, January 2016).

[26] The Board's capital rule allows firms that are not subject to Category I or II standards to opt out of including AOCI in regulatory capital. 12 C.F.R. § 217.22(b)(2).

Unrealized gains and losses are calculated as the difference between each security's fair value and its amortized cost. The amortized cost of each AFS security is equivalent to the purchase price of a debt security, which is periodically adjusted if the debt security was purchased at a price other than par or face value, has a principal repayment, or has an impairment recognized in earnings.[27]

OCI losses from AFS securities are computed directly from the projected change in fair value, taking into account credit losses and applicable interest-rate hedges on securities. All debt securities held in the AFS portfolio are subject to OCI losses, including

- U.S. Treasuries;
- U.S. agency securities;
- corporate debt securities;
- sovereign debt securities;
- municipal debt securities; and
- mortgage-backed, asset-backed, CLO, and CDO securities.

Losses on Trading and Private Equity Exposures and Credit Valuation Adjustment

The trading and private equity model generates loss estimates related to trading and private equity positions under the global market shock. In addition, the global market shock is applied to firm counterparty exposures to generate losses due to changes in CVA.

The trading and private equity model covers a wide range of firms' exposures to asset classes such as public equity, foreign exchange, interest rates, commodities, securitized products, traded credit (e.g., municipals, auction rate securities, corporate credit, and sovereign credit), private equity, and other fair-value assets. Loss projections are constructed by applying movements specified in the global market shock to market values of firm-provided positions and risk factor sensitivities.[28]

Incremental Default Risk

The Federal Reserve separately estimates the risk of losses arising from a jump-to-default of issuers of debt securities in the trading book, in excess of mark-to-market losses calculated by the trading model. Trading losses associated with IDR account for concentration risk in agencies, trading book securitization positions, and corporate, sovereign, and municipal bonds. These losses are applied in each of the nine quarters of the projection horizon.

Largest Counterparty Default Losses

The LCPD scenario component is applied to firms with substantial trading or custodial operations. The LCPD captures the risk of losses due to an unexpected default of the counterparty whose default on all derivatives and SFTs would generate the largest stressed losses for a firm.

Consistent with the Federal Reserve's modeling principles, losses associated with the LCPD component are recognized in the first quarter of the projection horizon.

Balance Projections and the Calculation of Regulatory Capital Ratios

Balance Sheet Items and Risk-Weighted Assets

The Federal Reserve generally projects that a firm takes actions to maintain its current level of assets, including its securities, trading assets, and loans, over the projection horizon. The Federal Reserve assumes that a firm's risk-weighted assets (RWAs) and leverage ratio denominators remain unchanged over the projection horizon except for changes primarily related to items subject to deduction from regulatory capital or due to changes to the Board's regulations.[29]

Calculation of Regulatory Capital Ratios

The five regulatory capital measures that are included in the supervisory stress test are the (1) CET1, (2) tier 1 risk-based capital, (3) total risk-based capital, (4) tier 1 leverage, and (5) supplementary leverage ratios (see table 2). A firm's regulatory capital ratios are calculated in accordance with the Board's regulatory capital rules using Federal Reserve projections of pre-tax net income and other scenario-

[27] The fair value of each AFS security is projected over the nine-quarter projection horizon using either a present-value calculation, a full revaluation using a security-specific discounted cash flow model, or a duration-based approach, depending on the asset class.

[28] The trading model is also used to calculate gains or losses on firms' portfolios of hedges on credit valuation adjustment exposures (CVA hedges).

[29] See 12 C.F.R. pt. 252, appendix B.

dependent components of the regulatory capital ratios.[30]

Pre-tax net income and the other scenario-dependent components of the regulatory capital ratios are combined with additional information, including assumptions about taxes and capital distributions, to calculate post-stress regulatory capital. In that calculation, the Federal Reserve first adjusts pre-tax net income to account for taxes and other components of net income, such as income attributable to minority interests, to arrive at after-tax net income.[31]

The Federal Reserve calculates the change in equity capital over the projection horizon by combining projected after-tax net income with changes in OCI, assumed capital distributions, and other components of equity capital. The path of regulatory capital over the projection horizon is calculated by combining the projected change in equity capital with the firm's starting capital position and accounting for other adjustments to regulatory capital specified in the Board's regulatory capital framework.[32]

The denominator of each firm's regulatory capital ratios, other than the leverage ratios, is calculated using the standardized approach for calculating RWAs for each quarter of the projection horizon, in accordance with the transition arrangements in the Board's capital rules.[33]

Capital Action Assumptions

To project post-stress capital ratios for the December stress test, the Federal Reserve uses the same set of standardized capital action assumptions that are specified in the Dodd-Frank Act stress test rules. As previously noted, in March 2020, the Board amended the capital action assumptions in its stress testing requirements.[34] According to these amended requirements, common stock dividend payments are assumed to be zero over the projection horizon. Scheduled dividend, interest, or principal payments that qualify as additional tier 1 capital or tier 2 capital are assumed to be paid, and repurchases of such capital instruments are assumed to be zero. The capital action assumptions do not include issuances of new common stock or preferred stock. The projection of post-stress capital ratios does not include capital actions or other changes in the balance sheet associated with any business plan changes.

Data Inputs

Most of the data used in the Federal Reserve's stress test projections are collected through the Capital Assessments and Stress Testing (FR Y-14A/Q/M) information collection, which includes a set of annual, quarterly, or monthly schedules.[35] These reports collect detailed data on PPNR, loans, securities, trading and counterparty risk, losses related to operational-risk events, and business plan changes. Each of the 33 firms participating in the December stress test submitted FR Y-14A, FR Y-14Q, and FR Y-14M data as of June 30, 2020. The FR Y-14Q and FR Y-14M data were submitted according to the timeline indicated in the instructions. Certain firms were also required to submit stressed counterparty data on the FR Y-14Q by November 2, 2020. The FR Y-14A reports, which include projected data, were also submitted by November 2, 2020.

Consistent with the Board's Stress Testing Policy Statement, the Federal Reserve makes certain assumptions about missing data or data with deficiencies significant enough to preclude the use of supervisory models.[36] Given a reasonable set of assumptions or approaches, all else equal, the Federal Reserve will opt to use those that result in larger losses or lower revenue.

The conservative assumptions applied depend on the nature of the data deficiency.[37] Where possible and

[30] In April 2020, the Board temporarily excluded deposits at Federal Reserve Banks and holdings of U.S. Treasuries from the denominator of the supplementary leverage ratio (SLR). This temporary relief is scheduled to expire after the first quarter of 2021, and the Federal Reserve has adjusted its supervisory capital calculation to reflect this change in the firms' projected SLR. 85 Fed. Reg. 20578 (Apr. 14, 2020).

[31] The Federal Reserve applies a consistent tax rate of 21 percent to pre-tax net income and accounts for deferred tax assets. The tax calculations do not include the effect of the temporary provision in the Coronavirus Aid, Relief, and Economic Security (CARES) Act to allow for tax carrybacks, which will expire at the end of the 2020 tax year.

[32] The regulatory capital framework specifies that regulatory capital ratios account for items subject to adjustment or deduction in regulatory capital, limits the recognition of certain assets that are less loss-absorbing, and imposes other restrictions.

[33] 12 C.F.R. pt. 217, subpt. G.

[34] 85 Fed. Reg. 15576 (Mar. 18, 2020).

[35] The FR Y-14 report forms are available on the Federal Reserve website at https://www.federalreserve.gov/apps/reportforms/default.aspx.

[36] 12 C.F.R. pt. 252, appendix B.

[37] The Federal Reserve has established conservative approaches for missing or insufficient data for its core PPNR, operational-risk loss, retail loan loss, wholesale loan loss, securities loss, fair-value loan loss, and CVA models. The methodology that

Box 2. Model Adjustments

The uncertainty associated with the COVID event, the path of the economy, and the government responses presents challenges for risk measurement and projections, including for the types of models used in the stress tests by both firms and the Federal Reserve. To address these challenges, the Federal Reserve made three targeted adjustments for the December stress test.[1] These adjustments are intended to maintain appropriate sensitivity to stress conditions and to ensure data consistency across firms. They affect the PD for corporate and certain consumer loans,[2] the LGD for income-producing CRE loans backed by hotel properties, and the calculation of the payment status for first-lien mortgages in forbearance. Following the Federal Reserve's policies related to model risk management, these adjustments were reviewed by an independent validation group.[3]

1 The sensitivity analysis outlined a series of targeted adjustments to capture material changes in the banking environment arising from the COVID event. Those targeted adjustments were specific to the sensitivity analysis to reflect the rapidly changing conditions at the time.

2 These include the models for C&I loans, small-business loans, business and corporate credit card loans, student loans, and additional categories of consumer lending as defined in the FR Y-9C, Schedule HC-C, items 6.b and 6.d.

3 Each year, an independent System Model Validation group validates the supervisory stress test models. This group's model validation process includes reviews of model performance, conceptual soundness, and the processes, procedures, and controls used in model development, implementation, and the production of results. See https://www.federalreserve.gov/publications/files/2020-march-supervisory-stress-test-methodology.pdf.

Corporate and Certain Consumer Loans

The COVID event has caused unprecedented changes in macroeconomic and financial variables. At the same time, credit risk measures have not risen appreciably from pre–COVID event levels, due to government responses to support households and businesses, as well as loss mitigation programs initiated by firms. As a result, relationships between macroeconomic variables and credit risk measures are outside their range of historical experience. However, these unusual conditions may be temporary, particularly in the absence of further fiscal actions or loss mitigation programs.

Due to these unusual circumstances, loss projections without a model adjustment would not capture the elevated risk associated with the COVID event. The Federal Reserve adjusted the second quarter of 2020 values of the unemployment rate and other relevant macroeconomic inputs to the corporate and certain consumer loan models by averaging over previous quarters. This adjustment better aligns the macroeconomic and financial variables with credit risk measures and results in higher loss projections than if the models were run without the adjustment.

Commercial Real Estate

Demand for hotels declined substantially due to travel restrictions and lockdowns, leading to an unprecedented increase in hotel vacancy rates.[4] The

4 As noted in the October 2020 Beige Book, "the travel and tourism industry saw modest improvement, but remained weak." See

(continued on next page)

appropriate, conservative values are assigned to specific deficient data items reported in the FR Y-14A/Q/M information collection. For example, if certain observations in the first-lien mortgage portfolio were missing credit scores, the Federal Reserve would apply to those observations the 10th percentile credit score across all FR Y-14M submissions for that portfolio.

In other cases in which the data deficiency is severe enough that a modeled estimate cannot be produced for a portfolio segment or portfolio, the Federal Reserve may assign a conservative rate (e.g., the 10th percentile PPNR rate or the 90th percentile loss rate) to that segment or portfolio. In general, conservative portfolio loss rates are calculated at the most granular definition of a portfolio possible. For example, home equity losses are composed of losses on HELOCs and HELs. If a given firm reported

the Federal Reserve uses to implement these assumptions may vary somewhat across supervisory models.

Box 2. Model Adjustments—*continued*

Federal Reserve's stress test framework projects that loans collateralized by hotel properties in markets with extraordinarily high vacancy rates would experience losses that reflect significantly lower collateral recovery rates than have been historically observed. In some cases, these recovery rates may be below the value of repurposing the land and/or structure to some other use. The Federal Reserve set a lower bound on the recovery rate for such loans that reflects this value. This adjustment results in lower loss projections than if the model was run without the adjustment.

First-Lien Mortgages

The COVID event has severely affected the ability of some borrowers to repay their loans.[5] Loan mitigation programs, implemented widely by the federal government and firms, assist borrowers struggling to make payments. While these programs affect nearly all consumer loans to varying degrees, the percentage of loan balances in forbearance is especially material for first-lien mortgages. At the same time, there are material differences in how individual firms reported loss mitigation data on regulatory reports.

The Federal Reserve adjusted the calculation of payment status for first-lien mortgages in forbearance in order to standardize reporting practices across firms, by using FR Y-14 data items that were reported consistently across firms. This adjustment results in higher loss projections than if the model was run without the adjustment.

Government Support Programs

Consistent with previous stress tests, the model adjustments in the December stress test do not directly account for an increase in government support programs. These programs—including expanded eligibility for unemployment insurance, larger unemployment insurance payments, and federal loan guarantee programs, such as the Paycheck Protection Program (PPP)—support credit access and improve credit quality for households and businesses.[6]

However, many COVID event-related support programs for households and businesses have already or will expire in the coming months. Furthermore, the Federal Reserve's stress test framework does not directly incorporate potential future policy actions, although some aspects may be indirectly taken into account during the design of the supervisory scenarios.

"The Beige Book – October 2020," available at https://www.federalreserve.gov/monetarypolicy/files/BeigeBook_20201021.pdf.

[5] A survey by the U.S. Census Bureau in November estimated that approximately 13 percent of mortgage borrowers had little to no confidence that they could complete their December mortgage payment. See Household Pulse Survey, https://www.census.gov/data/tables/2020/demo/hhp/hhp19.html.

[6] The Federal Reserve reflects the federal loan guarantee for PPP loans in its stress test. The Federal Reserve's stress test assumes that PPP loans earn interest income but incur no credit losses. In addition, PPP loans are assigned a risk weight of zero, consistent with the regulatory capital rule.

deficient data for its HELOC portfolio only, then the overall home equity losses for that firm would be based on a conservative loss rate applied to the HELOC portfolio, but HEL projected losses would be modeled using the supervisory model.

Firms are required to submit detailed loan and securities information for all material portfolios, where portfolios categories are defined in the FR Y-14M and FR Y-14Q instructions. The definition of a portfolio's materiality varies and depends primarily on the firm's complexity. Each firm has the option to either submit or not submit the relevant data schedule for a given portfolio that does not meet the materiality threshold. If the firm does not submit data on its immaterial portfolio(s), the Federal Reserve will assign the median loss rate estimated across the set of firms with material portfolios.

Supervisory Stress Test Results

This section describes the Federal Reserve's projections of losses, revenues, expenses, and capital positions for the 33 firms in the December stress test under the severely adverse and alternative severe scenarios. Results are presented both in the aggregate and for individual firms. The aggregate results reflect the sensitivities of losses, revenues, and capital at these firms as a group to the stressed economic and financial market conditions contained in those scenarios. The range of results across individual firms reflects differences in business focus, asset composition, revenue and expense sources, and portfolio risk characteristics. The comprehensive results for individual firms are reported in appendix B.

Changes in supervisory stress test results across exercises reflect changes in

- firm starting capital positions;
- scenarios used for the supervisory stress test;
- portfolio composition and risk characteristics; and
- models used in the supervisory stress test.

While the results under the two scenarios described here are approximately similar, there are differences designed to reflect a broad set of severe but plausible risks. Generally, the alternative severe scenario exhibits a smaller initial decrease in economic activity but a more sluggish recovery relative to the severely adverse scenario. The different scenario paths lead to slightly larger PPNR and trading revenue projections under the severely adverse scenario as equity asset values recover faster. Additionally, the faster recovery leads to lower loan losses and lower provision expenses over the full 13 quarters under the severely adverse scenario. In the aggregate, each of the five capital and leverage ratios declines similarly but subsequently rises more under the severely adverse scenario.

Severely Adverse Scenario

Under the supervisory severely adverse scenario, the aggregate CET1 ratio is projected to decline to a minimum of 9.6 percent before rising to 10.2 percent at the end of nine quarters (see table 3). In the aggregate, each of the five capital and leverage ratios declines over the course of the projection horizon from their second quarter of 2020 levels, with third quarter of 2022 levels ranging from 1.2 percentage points to 2.2 percentage points lower than at the start of the projection horizon (see table 3).

The changes in post-stress capital ratios vary considerably across firms (see figure 11), and table 4 presents these ratios for each of the 33 firms. Differences in the declines in ratios across firms are primarily related to differences in the Federal Reserve's projections of losses, revenues, and expenses.

Projected Losses

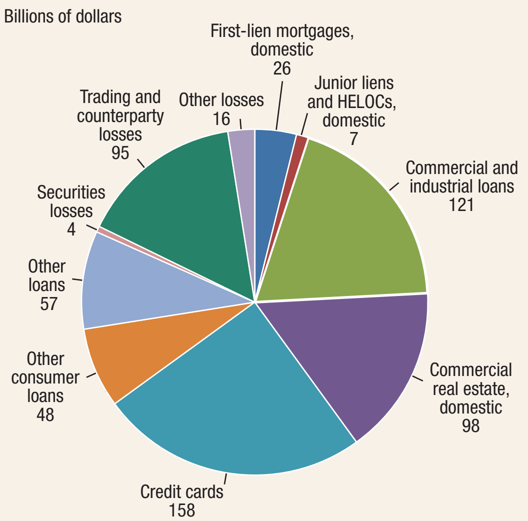
The Federal Reserve projects that the 33 firms as a group would experience significant losses on loans and other positions under the severely adverse scenario. In this scenario, losses are projected to be $629 billion for the 33 firms in the aggregate over the nine quarters of the projection horizon.

These losses include

- $514 billion in accrual loan portfolio losses;
- $4 billion in securities losses;[38]

[38] For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses, in accordance with FASB, *Financial Instruments–Credit Losses* (Topic 326), FASB ASU 2016-13 (Norwalk, Conn.: FASB, June 2016). Prior to the adoption of ASU 2016-13, securities credit losses were realized through other-than-temporary impairment (OTTI).

Figure 10. Projected losses in the severely adverse scenario



- $95 billion in trading and counterparty losses at the 13 firms with substantial trading, processing, or custodial operations; and
- $16 billion in additional losses from items such as loans booked under the FVO (see table 3).

Losses on accrual loan portfolios account for 82 percent of the projected losses for the 33 firms, while trading and counterparty losses account for 15 percent (see figure 10).

Loan Losses

Total loan losses are $514 billion for the 33 firms in the December stress test. For the same firms, total loan losses were $433 billion in the June stress test.

Loan losses on consumer products (domestic residential mortgages, domestic junior liens and HELOCs, credit cards, and other consumer loans) represent a slightly smaller share of losses than losses on commercial products (domestic CRE, C&I loans, and other loans) (see table 3). Consumer and commercial products represent 38 and 44 percent of total projected losses, respectively. C&I loan losses and credit card losses are the two largest categories of loan losses at $121 billion and $158 billion, respectively.

The aggregate nine-quarter cumulative loss rate for all accrual loan portfolios is 7.7 percent, where the loss rate is calculated as total projected loan losses over the nine quarters of the projection horizon divided by average loan balances over the horizon. However, total loan loss rates vary significantly across firms, ranging between 1.7 percent and 21.3 percent across these institutions (see table 8 and figure 12).

Firms' loan loss rates reflect differences in the portfolios held by each firm and the characteristics of the loans within each portfolio. Loan portfolio composition matters because projected loss rates vary significantly for different types of loans. In the aggregate, nine-quarter cumulative loss rates vary from 2.1 percent on domestic first-lien mortgages to 22.3 percent on credit cards, reflecting both differences in typical performance of these loans and differences in the sensitivity of different types of loans to the scenarios. In particular, lending categories for which performance is sensitive to credit spreads or unemployment rates may experience high stressed loss rates due to the considerable stress on these factors in the severely adverse and alternative severe scenarios.[39]

Projected loss rates on most loan categories show similar dispersion across firms (see table 8 and figures C.1 through C.7). There are significant differences across firms in the projected loan loss rates for similar types of loans. For example, while the median projected loss rate on C&I loans is 7.3 percent, the rates among firms with C&I loans vary from a low of 1.2 percent to a high of 27.0 percent. For credit card loans, the range of projected loss rates is from 13.3 percent to 35.8 percent, with a median of 23.7 percent.

Differences in projected loss rates over time primarily reflect changes in loan and borrower characteristics and changes in the scenarios. The overall loan loss rate in the December stress test is higher than the June stress test due to the generally higher projected loss rates across portfolios, with larger increases for severely affected portfolios such as CRE. The increase in risk was offset somewhat by a shift in the composition of firms' loan portfolios away from portfolios with higher loss rates. In particular, consumer credit card balances have declined significantly since the start of the year as a result of

[39] Additionally, losses are calculated based on the EAD, which includes both outstanding balances and any additional drawdown of the credit line that occurs prior to default, while loss rates are calculated as a percent of average outstanding balances over the projection horizon.

reduced consumer spending and higher loan repayment rates.

Losses on Trading, Private Equity, SFT, and Derivatives Positions

The severely adverse scenario results include $95 billion in trading and counterparty losses generated from the global market shock and LCPD components. For the 13 firms subject to one or both components, losses ranged from $0.9 billion to $23 billion (see table 6).

The relative size of losses across firms depends on the specific risk characteristics of each firm's trading positions, inclusive of hedges. Importantly, these projected losses are based on the trading positions and counterparty exposures held by these firms on the same as-of date (June 30, 2020) and could have differed if they had been based on a different date.

Projected PPNR

In the aggregate, the 33 firms are projected to generate $371 billion in PPNR cumulatively over the nine quarters of the projection horizon, equal to 2.0 percent of their combined average assets (see table 3). PPNR projections are driven by the shape of the yield curve, the path of asset prices, equity market volatility, and measures of economic activity in the severely adverse scenario. In addition, PPNR projections incorporate expenses stemming from estimates of elevated levels of losses from operational-risk events such as fraud, employee lawsuits, litigation-related expenses, or computer system or other operating disruptions.[40] In aggregate for the 33 firms, operational-risk losses are $160 billion for the December stress test. For the June stress test, operational-risk losses were $144 billion.

Aggregate PPNR as a percent of combined average assets is lower under the severely adverse scenario in the December stress test than in the June stress test. Lower PPNR is partly due to lower net interest income, reflecting a sharper decrease in the term spread under the severely adverse scenario. There were also fairly sizable changes in firms' balance sheets between December 2019 and June 2020. All else equal, larger balance sheets result in higher revenue that is roughly offset by higher expenses in the stress test projections. Noninterest income remained higher than in the June stress test, supported by stronger trading revenues and investment banking fees. Stronger noninterest income partly dampened the decrease in PPNR.

The ratio of projected cumulative PPNR to average assets varies across firms (see figure 13). A significant portion of this variation reflects differences in business focus across the institutions. For instance, the ratio of PPNR to assets tends to be higher at firms focusing on credit card lending, reflecting the higher net interest income that credit cards generally produce relative to other forms of lending.[41] Importantly, lower PPNR rates do not necessarily imply lower net income, because the same business focus and revenue risk characteristics determining differences in PPNR across firms could also result in offsetting differences in projected losses across firms.

Net Income and Regulatory Capital Treatment

Projected PPNR and provisions for loan losses are the primary determinants of projected pre-tax net income. The projected decline in pre-tax net income is 0.9 percent of average total assets, compared to a decline of 1.1 percent in the June stress test. Table 6 presents projections of the components of pre-tax net income, including provisions into the allowance and one-time income and expense and extraordinary items, under the severely adverse scenario for each of the 33 firms (see table 3 for aggregate). The projections are cumulative for the nine quarters of the projection horizon.

The Federal Reserve's projections of pre-tax net income under the severely adverse scenario imply negative net income at most of the 33 firms individually and for the firms as a group over the nine-quarter projection horizon. Projected pre-tax net income is an aggregate net loss of $173 billion over the projection horizon for the 33 firms. For the June stress test, projected pre-tax net income was a slightly larger loss of $177 billion even though CET1 declined less in June than in the December stress test. Further reducing CET1 are higher projected loan charge-offs combined with lower projected revenue over the projection horizon, which results in larger deferred tax assets. These assets are deducted from

40 These estimates are conditional on the severely adverse scenario and conservative assumptions. They are not a supervisory estimate of the firms' current or expected legal liability.

41 As noted, credit card lending also tends to generate relatively high loss rates, so the higher PPNR rates at these firms do not necessarily indicate higher profitability.

CET1 because they are not considered available to absorb losses.

The pre-tax net income projections incorporate loan losses through provisions, which equal projected loan losses plus the amount needed for the allowance to be at an appropriate level at the end of each quarter. The $429 billion in total provisions includes $514 billion in net charge-offs, with the remainder being the reserve release. These amounts are cumulative over the projection horizon and do not fully reveal variation in the allowance during the course of the nine quarters. Specifically, the projected allowance increases during the early quarters of the projection horizon, given the increased economic stress in the severely adverse scenario, and then declines as the economic stress abates.

While loan losses are higher for the December stress test than in the June stress test, the projected reserve release is due to the sharp increase in firms' loan-loss reserves since the beginning of the year. As firms simultaneously responded to the economic contraction and the adoption of CECL, loan-loss reserves more than doubled in the first two quarters of 2020.[42] Without the increase in loan-loss reserves, projected provision expenses would increase by $100 billion.

The ratio of pre-tax net income to average assets for each of the 33 firms ranges from −3.3 percent to 3.3 percent (see figure 14). Projected cumulative pre–tax net income for most of the firms (29 of 33) is negative over the projection horizon. Differences across the firms reflect differences in the sensitivity of the various components of net income to the economic and financial market conditions in the supervisory scenarios. Additional variation in projected net income results from the effect of the global market shock and LCPD components that affect 13 of the 33 firms.

Firms that are required to include AOCI in regulatory capital and those that opt in to including it are also affected by OCI (see table 6). OCI is driven by unrealized gains and losses on AFS securities in the supervisory stress test. The severely adverse scenario features a lower initial level for the 10-year Treasury yield, leading to a relatively smaller decline in the yield in the first projection quarter and subsequently lower projected unrealized gains for AFS securities. The interest rate path and credit spreads assumed in the scenario result in $5.2 billion of OCI over the nine quarters of the projection horizon for firms required to include AOCI in regulatory capital and those that opt in to including it.

[42] For firms electing the CECL transition provision in 12 C.F.R. pt. 217, subpt. G, the starting capital position used to project the path of regulatory capital includes eligible transitional amounts intended to mitigate the adverse effect of differences between allowances under CECL and the incurred loss methodology. Projected capital levels do not incorporate changes in the transitional amounts during the transition period, which has a duration of three or five years depending on the transition election.

Table 2. Applicable capital ratios and calculations for firms in the December stress test

Capital ratio	Calculation, by aspect of ratio	
	Capital in numerator	Denominator
Common equity tier 1 capital ratio	Definition of regulatory capital	Standardized approach risk-weighted assets
Tier 1 capital ratio	Definition of regulatory capital	Standardized approach risk-weighted assets
Total capital ratio	Definition of regulatory capital	Standardized approach risk-weighted assets
Tier 1 leverage ratio	Definition of regulatory capital	Average assets
Supplementary leverage ratio	Definition of regulatory capital	Average assets and off-balance sheet exposures

Table 3. 33 participating firms

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.2	10.2	9.6
Tier 1 capital ratio	13.8	11.8	11.3
Total capital ratio	16.4	14.2	14.0
Tier 1 leverage ratio	7.9	6.7	6.4
Supplementary leverage ratio	7.4	5.5	5.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	514.3	7.7
First-lien mortgages, domestic	25.8	2.1
Junior liens and HELOCs, domestic	6.9	3.1
Commercial and industrial[2]	120.7	7.5
Commercial real estate, domestic	98.3	12.6
Credit cards	158.0	22.3
Other consumer[3]	47.6	6.4
Other loans[4]	56.8	4.0

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and Paycheck Protection Program (PPP) loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	10,370.5	10,275.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	370.8	2.0
equals		
Net interest income	741.8	4.0
Noninterest income	889.8	4.8
less		
Noninterest expense[2]	1,260.8	6.8
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	429.1	
Credit losses on investment securities (AFS/HTM)[4]	3.6	
Trading and counterparty losses[5]	95.1	
Other losses/gains[6]	15.7	
equals		
Net income before taxes	-172.8	-0.9
Memo items		
Other comprehensive income[7]	5.2	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-37.2	-32.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table 4. Projected minimum common equity tier 1 capital ratio under the severely adverse scenario, 2020:Q3–2022:Q3
33 participating firms
Percent

Firm	Stressed ratios with Dodd-Frank Act stress testing capital action assumptions
Ally Financial Inc.	7.4
American Express Company	13.5
Bank of America Corporation	9.3
The Bank of New York Mellon Corporation	11.9
Barclays US LLC	14.7
BMO Financial Corp.	7.0
BNP Paribas USA, Inc.	11.2
Capital One Financial Corporation	7.1
Citigroup Inc.	9.6
Citizens Financial Group, Inc.	6.3
Credit Suisse Holdings (USA), Inc.	16.9
DB USA Corporation	19.8
Discover Financial Services	8.3
Fifth Third Bancorp	7.5
The Goldman Sachs Group, Inc.	8.5
HSBC North America Holdings Inc.	5.5
Huntington Bancshares Incorporated	8.0
JPMorgan Chase & Co.	10.0
KeyCorp	7.7
M&T Bank Corporation	5.0
Morgan Stanley	12.4
MUFG Americas Holdings Corporation	10.9
Northern Trust Corporation	12.6
The PNC Financial Services Group, Inc.	9.6
RBC US Group Holdings LLC	12.6
Regions Financial Corporation	7.1
Santander Holdings USA, Inc.	14.4
State Street Corporation	11.4
TD Group US Holdings LLC	15.4
Truist Financial Corporation	7.8
UBS Americas Holding LLC	16.7
U.S. Bancorp	7.6
Wells Fargo & Company	8.3

Note: The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratio presented is for the period 2020:Q3 to 2022:Q3.

Source: Federal Reserve estimates in the severely adverse scenario.

Table 5.A. Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3 under the severely adverse scenario: Risk-based Category I, II, and III firms

Percent

Firm	Common equity tier 1 capital ratio			Tier 1 capital ratio			Total capital ratio			Tier 1 leverage ratio			Supplementary leverage ratio[1]		
	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum
Bank of America Corporation	11.6	9.5	9.3	13.2	11.1	10.9	15.8	13.5	13.5	7.4	6.2	6.1	7.1	5.3	5.2
The Bank of New York Mellon Corporation	12.7	14.6	11.9	15.6	17.4	14.8	16.6	18.4	15.9	6.2	7.0	5.9	8.2	8.3	7.1
Barclays US LLC	17.3	15.5	14.7	20.4	18.7	18.0	23.4	21.9	21.3	9.5	8.7	8.2	9.1	7.6	7.2
Capital One Financial Corporation	12.4	7.2	7.1	14.2	8.9	8.9	16.7	11.5	11.4	10.3	6.6	6.6	9.7	5.5	5.5
Citigroup Inc.	11.8	10.9	9.6	13.3	12.5	11.1	16.5	15.5	14.5	7.1	6.6	5.8	6.7	5.3	4.7
Credit Suisse Holdings (USA), Inc.	21.4	17.8	16.9	22.0	18.5	17.6	22.1	18.5	17.8	14.0	11.2	10.6	12.6	10.1	9.5
DB USA Corporation	31.5	19.8	19.8	44.7	34.3	34.3	44.8	34.6	34.6	10.4	7.3	7.3	12.0	6.6	6.6
The Goldman Sachs Group, Inc.	13.3	9.8	8.5	15.2	11.8	10.5	18.1	14.6	13.6	7.6	5.8	5.1	6.6	4.4	3.8
HSBC North America Holdings Inc.	13.6	5.5	5.5	15.4	7.3	7.3	19.9	11.8	11.8	6.9	3.2	3.2	6.4	2.5	2.5
JPMorgan Chase & Co.	12.4	10.8	10.0	14.3	12.7	11.9	16.7	14.8	14.4	6.9	6.1	5.7	6.8	5.0	4.7
Morgan Stanley	16.5	13.1	12.4	18.6	15.2	14.5	21.0	17.7	17.1	8.1	6.5	6.2	7.3	5.1	4.9
Northern Trust Corporation	13.4	13.2	12.6	14.6	14.3	13.8	16.5	16.5	16.3	7.6	7.5	7.2	9.0	8.6	8.3
The PNC Financial Services Group, Inc.	11.3	9.8	9.6	12.4	11.0	10.8	14.9	13.0	13.0	9.4	8.3	8.1	9.3	7.1	6.9
State Street Corporation	12.3	13.3	11.4	14.6	15.6	13.7	15.7	16.8	14.9	6.1	6.5	5.7	8.3	8.2	7.2
TD Group US Holdings LLC	16.3	16.0	15.4	16.3	16.0	15.4	17.5	16.8	16.7	8.5	8.4	8.1	9.4	7.5	7.2
Truist Financial Corporation	9.7	7.9	7.8	11.6	9.8	9.7	14.0	12.5	12.5	9.0	7.7	7.6	8.5	6.7	6.6
UBS Americas Holding LLC	21.0	17.8	16.7	25.8	23.1	22.1	27.0	24.8	23.6	11.3	9.2	8.7	11.2	7.8	7.4
U.S. Bancorp	9.0	8.0	7.6	10.6	9.6	9.2	12.8	11.5	11.4	8.0	7.2	6.9	7.1	5.8	5.6
Wells Fargo & Company	11.0	8.7	8.3	12.6	10.4	9.9	15.9	13.4	13.3	8.0	6.5	6.2	7.5	5.3	5.1

Note: The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3.

[1] Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Source: Federal Reserve estimates in the severely adverse scenario.

Table 5.B. Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3 under the severely adverse scenario: Risk-based Category IV firms
Percent

Firm	Common equity tier 1 capital ratio			Tier 1 capital ratio			Total capital ratio			Tier 1 leverage ratio		
	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum
Ally Financial Inc.	10.1	7.4	7.4	11.9	9.1	9.1	13.8	11.1	11.1	8.9	6.9	6.9
American Express Company	13.6	17.0	13.5	14.8	18.2	14.8	16.5	19.8	16.5	10.4	13.1	10.4
BMO Financial Corp.	12.1	7.0	7.0	12.6	7.5	7.5	15.1	10.0	10.0	8.5	5.0	5.0
BNP Paribas USA, Inc.	15.8	11.2	11.2	15.8	11.2	11.2	18.2	13.5	13.5	8.6	6.1	6.1
Citizens Financial Group, Inc.	9.6	6.3	6.3	10.9	7.7	7.7	13.1	9.9	9.9	9.3	6.5	6.5
Discover Financial Services	11.7	9.0	8.3	12.9	10.2	9.4	14.7	12.0	11.4	10.0	8.1	7.3
Fifth Third Bancorp	9.7	7.6	7.5	11.0	8.9	8.8	14.2	12.1	12.1	8.2	6.6	6.5
Huntington Bancshares Incorporated	9.8	8.2	8.0	11.8	10.1	10.0	13.8	11.9	11.9	8.9	7.6	7.5
KeyCorp	9.1	8.0	7.7	10.5	9.4	9.1	12.8	11.3	11.3	8.8	7.9	7.7
M&T Bank Corporation	9.5	5.0	5.0	10.7	6.2	6.2	13.0	8.5	8.5	8.6	4.9	4.9
MUFG Americas Holdings Corporation	14.5	10.9	10.9	14.5	10.9	10.9	15.6	12.0	12.0	8.9	6.7	6.7
RBC US Group Holdings LLC	16.1	12.7	12.6	16.1	12.7	12.6	16.8	13.8	13.8	9.9	7.7	7.6
Regions Financial Corporation	8.9	7.2	7.1	10.4	8.7	8.6	12.6	10.8	10.8	8.4	7.1	7.0
Santander Holdings USA, Inc.	14.3	15.5	14.4	15.7	16.9	15.8	17.1	18.3	17.3	12.4	13.5	12.3

Note: The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3.

Source: Federal Reserve estimates in the severely adverse scenario.

Table 5.C. Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3 under the severely adverse scenario: 33 participating firms
Percent

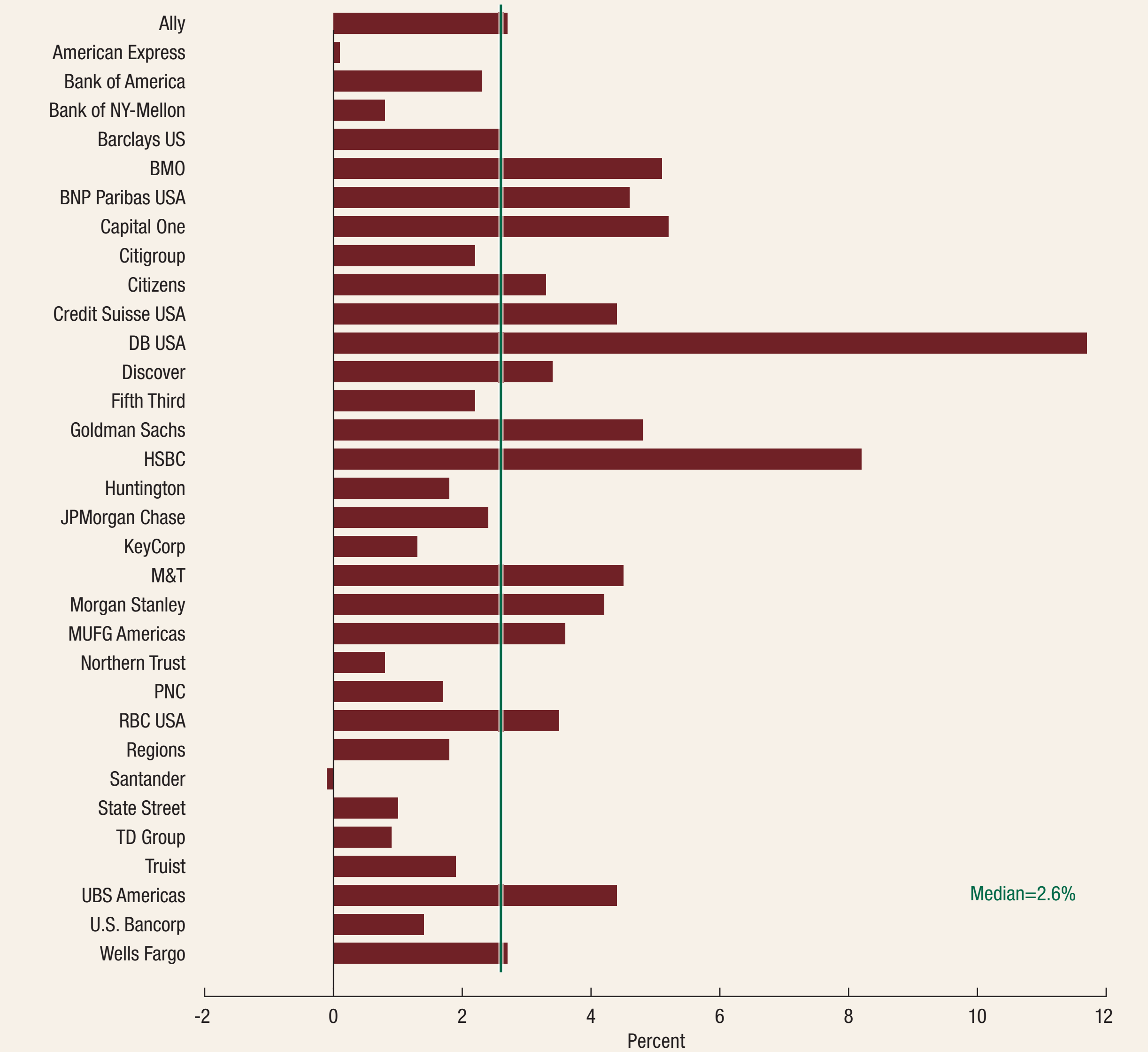
Firm	Common equity tier 1 capital ratio			Tier 1 capital ratio			Total capital ratio			Tier 1 leverage ratio			Supplementary leverage ratio[1]		
	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum
33 participating firms	12.2	10.2	9.6	13.8	11.8	11.3	16.4	14.2	14.0	7.9	6.7	6.4	7.4	5.5	5.2

Note: The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3.

[1] Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

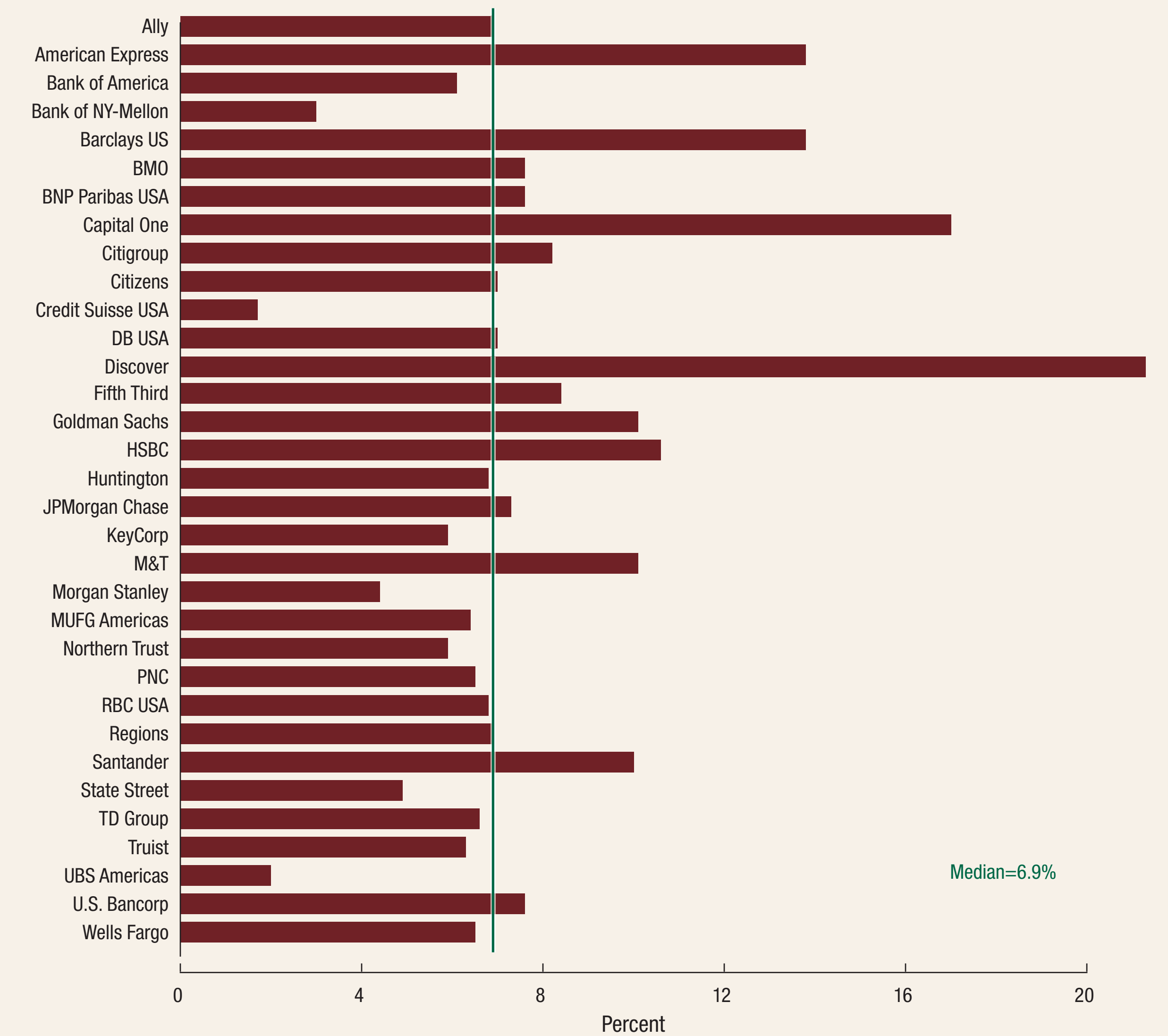
Source: Federal Reserve estimates in the severely adverse scenario.

Figure 11. Change from 2020:Q2 to minimum CET1 ratio in the severely adverse scenario



Note: Estimates are for the nine-quarter period from 2020:Q3–2022:Q3 as a percent of risk-weighted assets.

Figure 12. Total loan loss rates in the severely adverse scenario



Note: Estimates are for the nine-quarter period from 2020:Q3–2022:Q3 as a percent of average loan balances.

Table 6. Projected losses, revenue, and net income before taxes through 2022:Q3 under the severely adverse scenario: 33 participating firms

Billions of dollars

Firm	Sum of revenues		Minus sum of provisions and losses				Equals	Memo items	Other effects on capital
	Pre-provision net revenue[1]	Other revenue[2]	Provisions for loan and lease losses	Credit losses on investment securities (AFS/HTM)[3]	Trading and counterparty losses[4]	Other losses/ gains[5]	Net income before taxes	Other compre-hensive income[6]	AOCI included in capital (2022:Q3)
Ally Financial Inc.	3.7	0.0	7.0	0.3	0.0	0.0	-3.6	0.0	0.0
American Express Company	18.8	0.0	12.6	0.0	0.0	0.0	6.2	0.0	-2.9
Bank of America Corporation	34.4	0.0	51.8	0.1	11.3	1.6	-30.5	1.8	0.3
The Bank of New York Mellon Corporation	7.6	0.0	1.6	0.2	1.4	0.0	4.4	-0.1	-2.0
Barclays US LLC	4.7	0.0	4.3	0.0	1.0	0.0	-0.6	0.0	0.0
BMO Financial Corp.	0.8	0.0	6.6	0.0	0.0	0.0	-5.8	0.0	0.0
BNP Paribas USA, Inc.	0.8	0.0	5.0	0.0	0.0	0.0	-4.2	0.0	0.0
Capital One Financial Corporation	23.1	0.0	35.8	0.0	0.0	0.1	-12.8	0.0	-0.1
Citigroup Inc.	49.4	0.0	40.0	0.5	10.3	1.2	-2.7	1.1	-34.4
Citizens Financial Group, Inc.	3.7	0.0	8.2	0.0	0.0	0.0	-4.6	0.0	0.0
Credit Suisse Holdings (USA), Inc.	1.1	0.0	0.2	0.0	2.6	0.2	-1.8	0.0	0.0
DB USA Corporation	-0.7	0.0	0.9	0.0	0.9	0.0	-2.5	0.0	-0.2
Discover Financial Services	13.6	0.0	15.1	0.0	0.0	0.0	-1.5	0.0	0.0
Fifth Third Bancorp	5.7	0.0	8.2	0.0	0.0	0.0	-2.6	0.0	0.0
The Goldman Sachs Group, Inc.	17.4	0.0	11.8	0.0	20.6	3.8	-18.8	0.0	-0.4
HSBC North America Holdings Inc.	-0.4	0.0	7.2	0.1	1.2	0.0	-8.8	0.0	0.1
Huntington Bancshares Incorporated	3.1	0.0	4.1	0.0	0.0	0.0	-1.1	0.0	0.0
JPMorgan Chase & Co.	59.9	0.0	52.1	0.8	23.2	2.5	-18.8	-0.2	5.9
KeyCorp	4.0	0.0	5.0	0.0	0.0	0.1	-1.0	0.0	0.0
M&T Bank Corporation	4.3	0.0	8.9	0.0	0.0	0.0	-4.6	0.0	0.0
Morgan Stanley	6.1	0.0	7.6	0.1	10.1	3.3	-14.9	0.7	0.7
MUFG Americas Holdings Corporation	1.4	0.0	5.1	0.1	0.0	0.1	-3.8	0.0	0.0
Northern Trust Corporation	2.0	0.0	2.2	0.1	0.0	0.0	-0.3	0.2	0.6
The PNC Financial Services Group, Inc.	9.3	0.0	12.6	0.1	0.0	0.4	-3.8	0.0	0.0
RBC US Group Holdings LLC	1.9	0.0	4.2	0.2	0.0	0.0	-2.6	0.0	0.0
Regions Financial Corporation	3.6	0.0	5.0	0.0	0.0	0.0	-1.4	0.0	0.0
Santander Holdings USA, Inc.	7.2	0.0	4.5	0.0	0.0	0.4	2.3	0.0	0.0
State Street Corporation	3.9	0.0	1.5	0.1	1.0	0.0	1.3	0.0	-0.6
TD Group US Holdings LLC	9.7	0.0	9.7	0.2	0.0	0.0	-0.2	0.0	0.0
Truist Financial Corporation	12.2	0.0	17.3	0.1	0.0	0.2	-5.5	0.0	0.0
UBS Americas Holding LLC	2.5	0.0	1.3	0.0	1.2	0.1	-0.1	0.0	0.0
U.S. Bancorp	16.7	0.0	19.8	0.0	0.0	0.0	-3.1	0.0	-0.1
Wells Fargo & Company	39.4	0.0	52.0	0.6	10.4	1.6	-25.2	1.7	1.2
33 participating firms	370.8	0.0	429.1	3.6	95.1	15.7	-172.8	5.2	-32.0

Note: These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. Values may not sum precisely due to rounding.

1 Pre-provision net revenue includes losses from operational-risk events and other real estate owned costs.

2 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

3 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

4 Trading and counterparty losses include mark-to-market and credit valuation adjustments losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

5 Other losses/gains includes projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

6 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Source: Federal Reserve estimates in the severely adverse scenario.

Table 7. Projected loan losses by type of loan for 2020:Q3–2022:Q3 under the severely adverse scenario: 33 participating firms

Billions of dollars

Firm	Loan losses	First-lien mortgages, domestic	Junior liens and HELOCs, domestic	Commercial and industrial[1]	Commercial real estate, domestic	Credit cards	Other consumer[2]	Other loans[3]
Ally Financial Inc.	8.1	0.2	0.0	2.4	0.3	0.0	5.0	0.2
American Express Company	15.4	0.0	0.0	5.3	0.0	9.7	0.3	0.0
Bank of America Corporation	60.2	4.7	0.9	16.7	12.5	17.6	1.6	6.2
The Bank of New York Mellon Corporation	1.6	0.1	0.0	0.1	0.4	0.0	0.4	0.6
Barclays US LLC	5.0	0.0	0.0	0.0	0.0	4.8	0.1	0.1
BMO Financial Corp.	6.5	0.2	0.1	3.0	1.7	0.1	0.3	1.2
BNP Paribas USA, Inc.	5.0	0.2	0.1	1.5	1.7	0.1	1.1	0.4
Capital One Financial Corporation	42.6	0.0	0.0	4.7	2.1	27.5	7.2	1.1
Citigroup Inc.	55.9	1.9	0.8	10.3	2.8	30.6	2.4	7.2
Citizens Financial Group, Inc.	8.6	0.5	0.5	2.4	2.7	0.4	1.7	0.4
Credit Suisse Holdings (USA), Inc.	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1
DB USA Corporation	0.9	0.1	0.0	0.0	0.7	0.0	0.0	0.1
Discover Financial Services	18.9	0.0	0.1	0.0	0.0	17.1	1.6	0.0
Fifth Third Bancorp	9.3	0.4	0.2	3.5	3.3	0.6	0.8	0.4
The Goldman Sachs Group, Inc.	13.5	0.0	0.0	4.7	3.3	0.6	0.9	4.1
HSBC North America Holdings Inc.	7.4	0.5	0.1	2.0	3.7	0.4	0.0	0.6
Huntington Bancshares Incorporated	5.0	0.5	0.2	1.5	1.6	0.1	0.8	0.2
JPMorgan Chase & Co.	70.1	4.3	0.6	18.6	5.0	28.3	2.3	11.0
KeyCorp	5.8	0.3	0.3	2.2	1.8	0.2	0.5	0.5
M&T Bank Corporation	9.2	0.5	0.2	1.3	6.0	0.1	0.8	0.3
Morgan Stanley	7.2	0.5	0.0	1.2	2.3	0.0	0.2	3.0
MUFG Americas Holdings Corporation	5.4	0.9	0.1	1.7	1.5	0.1	0.6	0.5
Northern Trust Corporation	2.0	0.1	0.0	0.3	0.4	0.0	0.0	1.2
The PNC Financial Services Group, Inc.	15.8	0.5	0.3	6.7	4.8	1.5	1.0	1.2
RBC US Group Holdings LLC	3.9	0.5	0.0	0.9	1.6	0.0	0.2	0.7
Regions Financial Corporation	6.0	0.5	0.2	2.0	1.8	0.2	0.7	0.5
Santander Holdings USA, Inc.	9.0	0.2	0.2	0.8	1.1	0.1	6.4	0.2
State Street Corporation	1.3	0.0	0.0	0.3	0.1	0.0	0.0	0.9
TD Group US Holdings LLC	11.2	0.6	0.3	2.3	2.4	3.8	0.9	0.9
Truist Financial Corporation	19.2	1.0	0.4	4.4	7.0	0.7	3.9	1.7
UBS Americas Holding LLC	1.1	0.4	0.0	0.1	0.0	0.0	0.2	0.3
U.S. Bancorp	23.1	1.3	0.6	6.7	6.6	5.0	1.7	1.3
Wells Fargo & Company	59.9	4.9	0.7	13.1	19.1	8.2	3.9	10.0
33 participating firms	514.3	25.8	6.9	120.7	98.3	158.0	47.6	56.8

Note: These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. Values may not sum precisely due to rounding.

1 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

2 Other consumer loans include student loans and automobile loans.

3 Other loans include international real estate loans.

Source: Federal Reserve estimates in the severely adverse scenario.

Table 8. Projected loan losses by type of loan for 2020:Q3–2022:Q3 under the severely adverse scenario: 33 participating firms

Percent of average loan balances[1]

Firm	Loan losses	First-lien mortgages, domestic	Junior liens and HELOCs, domestic	Commercial and industrial[2]	Commercial real estate, domestic	Credit cards	Other consumer[3]	Other loans[4]
Ally Financial Inc.	6.9	1.4	3.8	8.2	5.7	0.0	7.7	14.1
American Express Company	13.8	0.0	0.0	14.7	0.0	13.3	16.7	5.6
Bank of America Corporation	6.1	2.0	2.4	5.8	16.4	20.9	2.1	3.3
The Bank of New York Mellon Corporation	3.0	1.3	7.5	2.9	9.2	0.0	12.1	1.7
Barclays US LLC	13.8	0.0	0.0	22.8	12.6	22.4	16.7	0.7
BMO Financial Corp.	7.6	1.9	3.7	8.0	15.1	21.2	4.8	6.0
BNP Paribas USA, Inc.	7.6	2.3	3.4	10.3	11.1	23.7	7.6	3.5
Capital One Financial Corporation	17.0	2.5	6.9	13.0	6.6	27.7	11.4	5.4
Citigroup Inc.	8.2	2.3	7.4	5.7	11.7	21.4	8.2	3.3
Citizens Financial Group, Inc.	7.0	2.3	4.2	6.3	15.5	25.1	6.4	6.2
Credit Suisse Holdings (USA), Inc.	1.7	0.0	0.0	0.0	52.2	0.0	16.7	0.6
DB USA Corporation	7.0	2.5	6.0	1.2	16.5	0.0	8.0	2.5
Discover Financial Services	21.3	2.5	9.9	27.0	22.3	24.4	9.6	5.5
Fifth Third Bancorp	8.4	2.7	3.8	7.7	20.9	29.3	5.1	4.3
The Goldman Sachs Group, Inc.	10.1	2.5	4.0	12.6	44.8	23.7	11.1	5.3
HSBC North America Holdings Inc.	10.6	3.0	8.1	6.7	33.1	35.8	11.2	7.3
Huntington Bancshares Incorporated	6.8	3.8	3.1	7.2	16.4	23.7	4.8	3.8
JPMorgan Chase & Co.	7.3	2.1	2.2	10.3	4.2	22.3	3.8	4.7
KeyCorp	5.9	2.9	3.9	5.9	11.6	23.7	5.0	2.9
M&T Bank Corporation	10.1	3.4	3.6	7.3	16.3	23.7	7.4	5.0
Morgan Stanley	4.4	1.7	4.0	8.4	18.3	0.0	0.9	3.6
MUFG Americas Holdings Corporation	6.4	2.9	3.6	10.2	8.1	23.7	17.0	4.4
Northern Trust Corporation	5.9	1.2	7.9	6.3	8.7	0.0	16.7	6.4
The PNC Financial Services Group, Inc.	6.5	1.5	1.9	7.1	13.3	26.2	4.0	3.1
RBC US Group Holdings LLC	6.8	3.1	3.5	11.0	11.3	23.7	13.8	3.7
Regions Financial Corporation	6.9	2.7	4.3	7.8	12.9	19.3	12.9	3.0
Santander Holdings USA, Inc.	10.0	2.9	3.8	5.1	7.2	23.7	16.8	2.5
State Street Corporation	4.9	0.0	0.0	6.6	6.1	0.0	0.6	4.5
TD Group US Holdings LLC	6.6	2.1	4.0	6.5	8.2	30.1	3.4	3.1
Truist Financial Corporation	6.3	2.0	2.7	6.1	11.8	19.0	7.1	3.7
UBS Americas Holding LLC	2.0	2.0	0.0	2.4	2.0	23.7	0.9	6.9
U.S. Bancorp	7.6	1.9	4.0	7.5	17.3	23.7	3.9	4.6
Wells Fargo & Company	6.5	1.8	2.0	7.2	14.9	22.8	5.4	5.0
33 participating firms	7.7	2.1	3.1	7.5	12.6	22.3	6.4	4.0

Note: These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. Values may not sum precisely due to rounding.

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

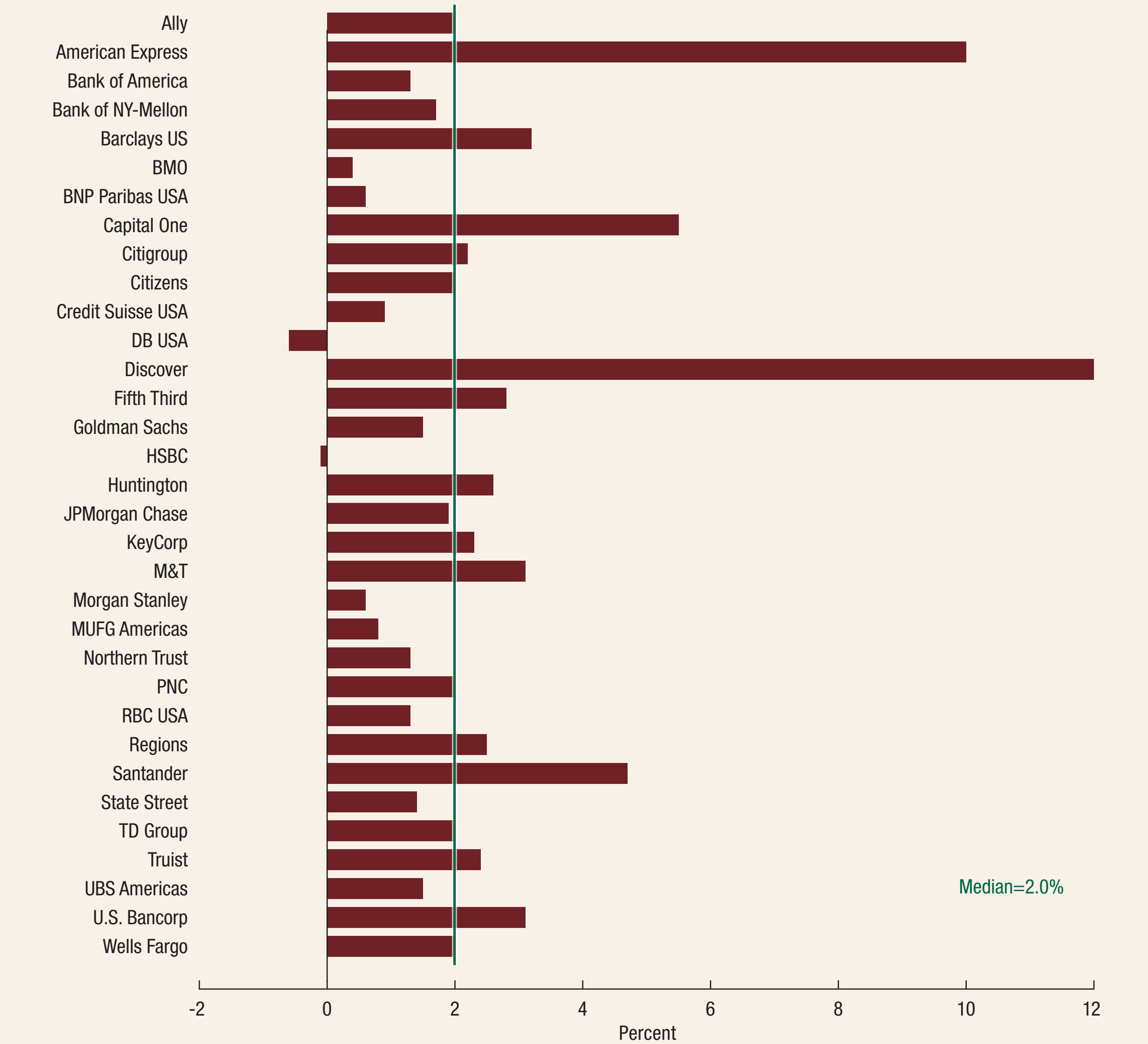
2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

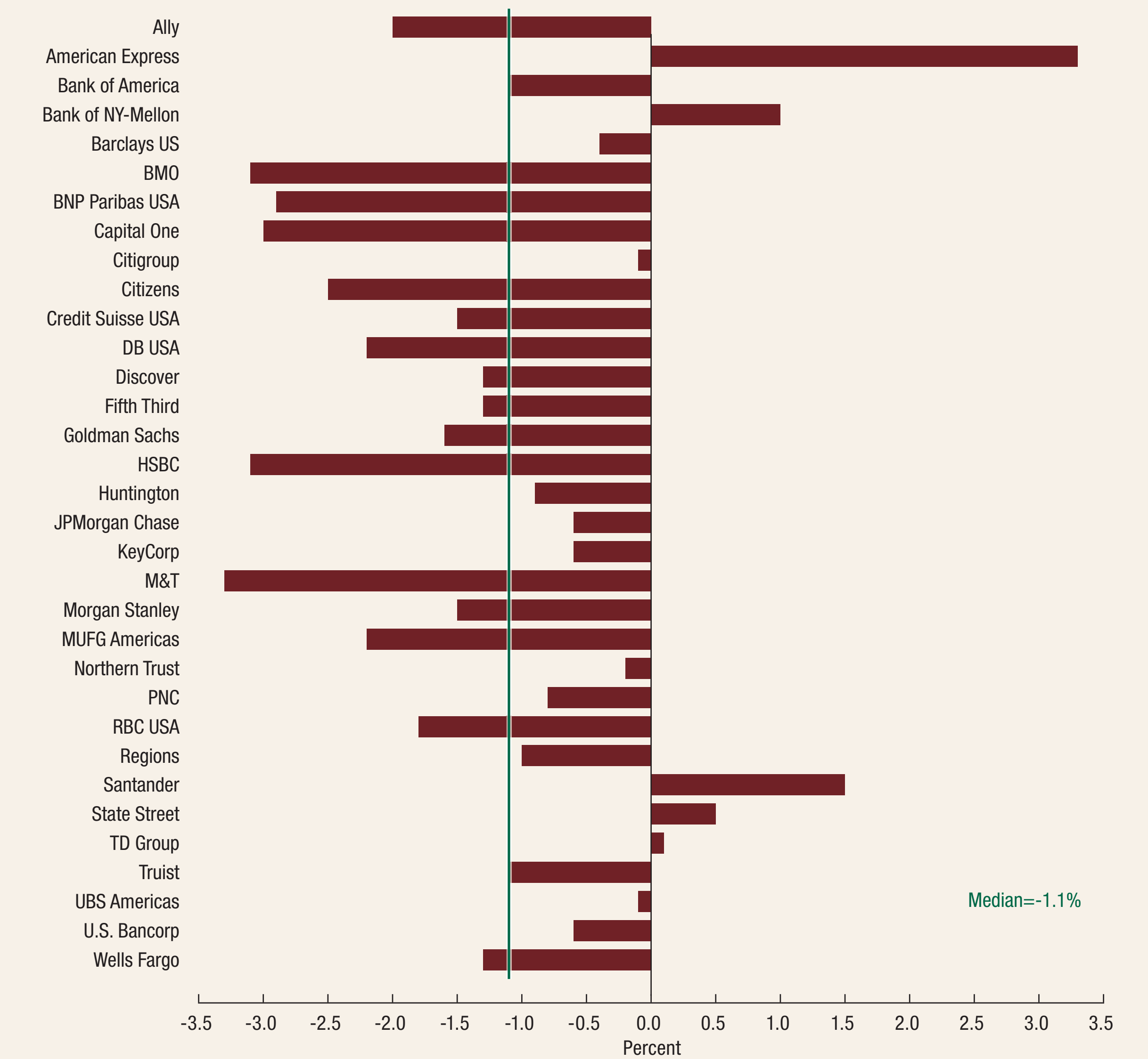
Source: Federal Reserve estimates in the severely adverse scenario.

Figure 13. PPNR rates in the severely adverse scenario



Note: Estimates are for the nine-quarter period from 2020:Q3–2022:Q3 as a percent of average assets.

Figure 14. Pre-tax net income rates in the severely adverse scenario



Note: Estimates are for the nine-quarter period from 2020:Q3–2022:Q3 as a percent of average assets.

Alternative Severe Scenario

The projected maximum declines in post-stress capital ratios in the alternative severe scenario are approximately similar to those under the severely adverse scenario. In the aggregate, each of the five capital and leverage ratios declines to a similar minimum as the severely adverse scenario, but the ratios rise less over the remaining projection horizon, reaching a lower ending value than the severely adverse scenario. The levels at the end of the projection horizon in the third quarter of 2022 range from 1.4 percentage points to 2.3 percentage points lower than at the start of the projection horizon (see table 9) for the five capital and leverage ratios. The changes in post-stress capital ratios vary considerably across the 33 firms (see figure 16 and table 10).

Generally, the slightly lower ending capital and leverage ratios reflect the sluggish recovery and relatively higher persistence of stress in the alternative severe scenario compared to the severely adverse. The alternative severe scenario features a less-severe initial drop in global economic activity relative to the severely adverse scenario but a more sluggish and severe subsequent recovery. Unemployment, volatility, and corporate spreads stay elevated for a longer period of time, while the term spread recovers slightly faster.

PPNR is slightly lower compared to the severely adverse scenario due to lower trading revenue from the slower recovery in equity asset values. This lower revenue is only partially offset by higher interest income as a result of wider net interest margins compared to the severely adverse scenario. While larger balance sheets result in higher revenue projections, the increased revenue is roughly offset by higher expenses in the stress test projections.

Losses over the full 13-quarter projection horizon are higher in the alternative severe scenario, leading to higher projected loan loss provisions.[43] Loss rates in the first nine quarters are lower in the alternative severe scenario, as the sluggish recovery pushes losses further out into the projection horizon than in the severely adverse scenario. Other losses and gains are slightly higher in the alternative severe scenario, reflecting the larger markdowns for loans held under the FVO as spreads stay elevated for a longer period of time. The alternative severe projections imply lower aggregate pre-tax net income, which slightly reduces post-stress ending capital ratios.

Projected Losses

The Federal Reserve projects that the 33 firms as a group would experience significant losses on loans and other positions under the alternative severe scenario. In this scenario, losses are projected to be $612 billion for the 33 firms in the aggregate over the nine quarters of the projection horizon.

These losses include

- $491 billion in accrual loan portfolio losses;
- $4 billion in securities losses;[44]
- $95 billion in trading and counterparty losses at the 13 firms with substantial trading, processing, or custodial operations; and
- $22 billion in additional losses from items such as loans booked under the FVO (see table 9).

Losses on accrual loan portfolios account for 80 percent of the projected losses for the 33 firms, while trading and counterparty losses account for 16 percent (see figure 15).

Loan Losses

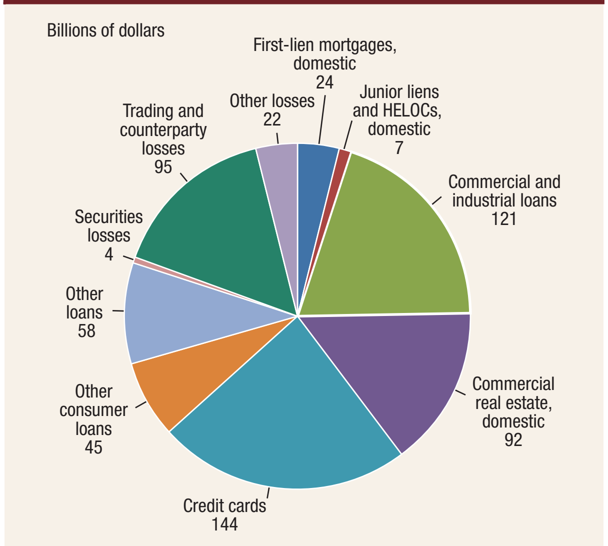
Total loan losses are $491 billion for the 33 firms (see table 9). For the June stress test, total loan losses were $433 billion for the same firms. Consumer and commercial products represent 36 and 44 percent of total projected losses, respectively. C&I loan losses and credit card losses are the two largest categories of loan losses at $121 billion and $144 billion, respectively.

For the full group of 33 firms, the nine-quarter cumulative loss rate for all accrual loan portfolios is 7.3 percent, where the loss rate is calculated as total projected loan losses over the nine quarters of the projection horizon divided by average loan balances over the horizon. However, total loan loss rates vary significantly across firms, ranging between 1.6 per-

43 The Federal Reserve assumes that the allowance at the end of each quarter covers projected loan losses for four quarters into the future. The allowance at the end of the ninth quarter equals projected loan losses from quarters 10 through 13.

44 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses, in accordance with FASB, *Financial Instruments–Credit Losses* (Topic 326), FASB ASU 2016-13 (Norwalk, Conn.: FASB, June 2016). Prior to the adoption of ASU 2016-13, securities credit losses were realized through OTTI.

Figure 15. Projected losses in the alternative severe scenario



cent and 19.5 percent across these institutions (see table 14 and figure 17).

Losses on Trading, Private Equity, SFT, and Derivatives Positions

The global market shock and LCPD components in the alternative severe scenario are the same as those reported in the severely adverse scenario.

Projected PPNR

In the aggregate, the 33 firms are projected to generate $363 billion in PPNR cumulatively over the nine quarters of the projection horizon, equal to 1.9 percent of their combined average assets (see table 9). The Federal Reserve's PPNR projections are driven by the shape of the yield curve, the path of asset prices, equity market volatility, and measures of economic activity in the alternative severe scenario. In addition, the PPNR projections incorporate expenses stemming from estimates of elevated levels of losses from operational-risk events such as fraud, employee lawsuits, litigation-related expenses, or computer system or other operating disruptions.[45]

[45] These estimates are conditional on the alternative severe scenario and on conservative assumptions. They are not a supervisory estimate of the firms' current or expected legal liability.

In aggregate for the 33 firms, operational-risk losses are $162 billion for the December stress test. For the June stress test, operational-risk losses were $144 billion.

Net Income and Regulatory Capital Treatment

Projected PPNR and losses are the primary determinants of projected pre-tax net income. The projected decline in pre-tax net income is 1.1 percent of average total assets, which is the same as the decline of 1.1 percent in the June stress test. Table 12 presents projections of the components of pre-tax net income, including provisions into the allowance and one-time income and expense and extraordinary items, under the alternative severe scenario for each of the 33 firms (see table 9 for aggregate). The projections are cumulative for the nine quarters of the projection horizon.

The Federal Reserve's projections of pre-tax net income under the alternative severe scenario imply negative net income at most of the 33 firms individually and for the firms as a group over the nine-quarter projection horizon. Projected pre-tax net income is an aggregate net loss of $198 billion over the projection horizon for the 33 firms. The projected pre–tax net income incorporates $440 billion in total provisions.

The ratio of pre-tax net income to average assets for each of the 33 firms ranges from −3.5 percent to 3.5 percent (see figure 19). Projected cumulative pre–tax net income for most of the firms is negative over the projection horizon.

Firms that are required to include AOCI in regulatory capital and those that opt in to including it are also affected by OCI (see table 12). OCI is driven by unrealized gains and losses on AFS securities in the supervisory stress test. The interest rate path and credit spreads assumed in the alternative severe scenario result in a loss of $3.1 billion of OCI over the nine quarters of the projection horizon for firms required to include AOCI in regulatory capital and those that opt in to including it.

Table 9. 33 participating firms

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.2	9.9	9.7
Tier 1 capital ratio	13.8	11.5	11.4
Total capital ratio	16.4	14.1	14.1
Tier 1 leverage ratio	7.9	6.5	6.4
Supplementary leverage ratio	7.4	5.3	5.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	491.2	7.3
First-lien mortgages, domestic	24.4	2.0
Junior liens and HELOCs, domestic	6.6	3.0
Commercial and industrial[2]	121.4	7.6
Commercial real estate, domestic	92.4	11.9
Credit cards	144.1	20.3
Other consumer[3]	44.6	6.0
Other loans[4]	57.7	4.1

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	10,370.5	10,271.8

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	362.9	1.9
equals		
Net interest income	747.4	4.0
Noninterest income	879.0	4.7
less		
Noninterest expense[2]	1,263.5	6.8
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	440.1	
Credit losses on investment securities (AFS/HTM)[4]	3.7	
Trading and counterparty losses[5]	95.1	
Other losses/gains[6]	22.4	
equals		
Net income before taxes	-198.4	-1.1
Memo items		
Other comprehensive income[7]	-3.1	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-37.2	-40.4

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table 10. Projected minimum common equity tier 1 capital ratio under the alternative severe scenario, 2020:Q3–2022:Q3
33 participating firms
Percent

Firm	Stressed ratios with Dodd-Frank Act stress testing capital action assumptions
Ally Financial Inc.	7.3
American Express Company	13.7
Bank of America Corporation	9.2
The Bank of New York Mellon Corporation	12.2
Barclays US LLC	15.2
BMO Financial Corp.	6.5
BNP Paribas USA, Inc.	10.8
Capital One Financial Corporation	7.4
Citigroup Inc.	9.8
Citizens Financial Group, Inc.	6.2
Credit Suisse Holdings (USA), Inc.	17.1
DB USA Corporation	19.5
Discover Financial Services	9.6
Fifth Third Bancorp	7.5
The Goldman Sachs Group, Inc.	8.3
HSBC North America Holdings Inc.	5.1
Huntington Bancshares Incorporated	8.1
JPMorgan Chase & Co.	10.0
KeyCorp	7.7
M&T Bank Corporation	4.8
Morgan Stanley	11.9
MUFG Americas Holdings Corporation	10.7
Northern Trust Corporation	12.6
The PNC Financial Services Group, Inc.	9.6
RBC US Group Holdings LLC	12.4
Regions Financial Corporation	7.0
Santander Holdings USA, Inc.	14.8
State Street Corporation	11.5
TD Group US Holdings LLC	15.6
Truist Financial Corporation	7.7
UBS Americas Holding LLC	16.7
U.S. Bancorp	7.8
Wells Fargo & Company	8.3

Note: The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratio presented is for the period 2020:Q3 to 2022:Q3.

Source: Federal Reserve estimates in the alternative severe scenario.

Table 11.A. Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3 under the alternative severe scenario: Risk-based Category I, II, and III firms

Percent

Firm	Common equity tier 1 capital ratio			Tier 1 capital ratio			Total capital ratio			Tier 1 leverage ratio			Supplementary leverage ratio[1]		
	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum
Bank of America Corporation	11.6	9.2	9.2	13.2	10.8	10.8	15.8	13.4	13.4	7.4	6.0	6.0	7.1	5.2	5.2
The Bank of New York Mellon Corporation	12.7	14.1	12.2	15.6	16.9	15.1	16.6	18.0	16.2	6.2	6.8	6.0	8.2	8.0	7.2
Barclays US LLC	17.3	15.7	15.2	20.4	18.9	18.4	23.4	22.2	21.7	9.5	8.7	8.5	9.1	7.7	7.5
Capital One Financial Corporation	12.4	7.4	7.4	14.2	9.2	9.2	16.7	11.8	11.8	10.3	6.8	6.8	9.7	5.7	5.7
Citigroup Inc.	11.8	10.6	9.8	13.3	12.2	11.4	16.5	15.5	14.8	7.1	6.5	6.0	6.7	5.2	4.8
Credit Suisse Holdings (USA), Inc.	21.4	17.7	17.1	22.0	18.3	17.7	22.1	18.4	17.8	14.0	11.1	10.7	12.6	10.0	9.6
DB USA Corporation	31.5	19.5	19.5	44.7	34.0	34.0	44.8	34.5	34.5	10.4	7.3	7.3	12.0	6.6	6.6
The Goldman Sachs Group, Inc.	13.3	9.2	8.3	15.2	11.2	10.3	18.1	14.1	13.5	7.6	5.5	5.1	6.6	4.1	3.8
HSBC North America Holdings Inc.	13.6	5.1	5.1	15.4	7.0	7.0	19.9	11.8	11.8	6.9	3.0	3.0	6.4	2.4	2.4
JPMorgan Chase & Co.	12.4	10.3	10.0	14.3	12.3	11.9	16.7	14.7	14.4	6.9	5.9	5.7	6.8	4.8	4.7
Morgan Stanley	16.5	12.3	11.9	18.6	14.4	14.1	21.0	17.0	16.8	8.1	6.2	6.0	7.3	4.9	4.7
Northern Trust Corporation	13.4	12.8	12.6	14.6	13.9	13.8	16.5	16.3	16.3	7.6	7.3	7.3	9.0	8.3	8.2
The PNC Financial Services Group, Inc.	11.3	9.6	9.6	12.4	10.8	10.8	14.9	13.2	13.2	9.4	8.2	8.1	9.3	6.9	6.9
State Street Corporation	12.3	12.9	11.5	14.6	15.2	13.8	15.7	16.4	15.1	6.1	6.3	5.8	8.3	8.0	7.3
TD Group US Holdings LLC	16.3	16.0	15.6	16.3	16.0	15.6	17.5	17.1	16.8	8.5	8.4	8.2	9.4	7.5	7.3
Truist Financial Corporation	9.7	7.7	7.7	11.6	9.6	9.6	14.0	12.5	12.5	9.0	7.5	7.5	8.5	6.6	6.6
UBS Americas Holding LLC	21.0	17.6	16.7	25.8	22.9	22.1	27.0	24.8	23.6	11.3	9.1	8.7	11.2	7.8	7.5
U.S. Bancorp	9.0	7.9	7.8	10.6	9.5	9.4	12.8	11.7	11.6	8.0	7.2	7.1	7.1	5.8	5.7
Wells Fargo & Company	11.0	8.4	8.3	12.6	10.0	9.9	15.9	13.4	13.3	8.0	6.3	6.2	7.5	5.2	5.1

Note: The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3.

[1] Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Source: Federal Reserve estimates in the alternative severe scenario.

Table 11.B. Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3 under the alternative severe scenario: Risk-based Category IV firms

Percent

Firm	Common equity tier 1 capital ratio			Tier 1 capital ratio			Total capital ratio			Tier 1 leverage ratio		
	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum
Ally Financial Inc.	10.1	7.3	7.3	11.9	9.1	9.1	13.8	11.1	11.1	8.9	6.8	6.8
American Express Company	13.6	17.3	13.7	14.8	18.5	15.0	16.5	20.2	16.6	10.4	13.3	10.6
BMO Financial Corp.	12.1	6.5	6.5	12.6	7.0	7.0	15.1	9.8	9.8	8.5	4.7	4.7
BNP Paribas USA, Inc.	15.8	10.8	10.8	15.8	10.8	10.8	18.2	13.5	13.5	8.6	5.8	5.8
Citizens Financial Group, Inc.	9.6	6.2	6.2	10.9	7.5	7.5	13.1	9.7	9.7	9.3	6.3	6.3
Discover Financial Services	11.7	10.1	9.6	12.9	11.2	10.8	14.7	13.1	12.7	10.0	8.9	8.5
Fifth Third Bancorp	9.7	7.5	7.5	11.0	8.7	8.7	14.2	12.0	12.0	8.2	6.5	6.5
Huntington Bancshares Incorporated	9.8	8.1	8.1	11.8	10.0	10.0	13.8	12.1	12.1	8.9	7.5	7.5
KeyCorp	9.1	7.7	7.7	10.5	9.1	9.0	12.8	11.3	11.3	8.8	7.6	7.6
M&T Bank Corporation	9.5	4.8	4.8	10.7	6.0	6.0	13.0	8.4	8.4	8.6	4.8	4.8
MUFG Americas Holdings Corporation	14.5	10.7	10.7	14.5	10.7	10.7	15.6	12.0	12.0	8.9	6.5	6.5
RBC US Group Holdings LLC	16.1	12.4	12.4	16.1	12.4	12.4	16.8	13.7	13.7	9.9	7.5	7.5
Regions Financial Corporation	8.9	7.0	7.0	10.4	8.5	8.5	12.6	10.7	10.7	8.4	6.9	6.9
Santander Holdings USA, Inc.	14.3	15.6	14.8	15.7	16.9	16.2	17.1	18.3	17.6	12.4	13.5	12.6

Note: The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3.

Source: Federal Reserve estimates in the alternative severe scenario.

Table 11.C. Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3 under the alternative severe scenario: 33 participating firms

Percent

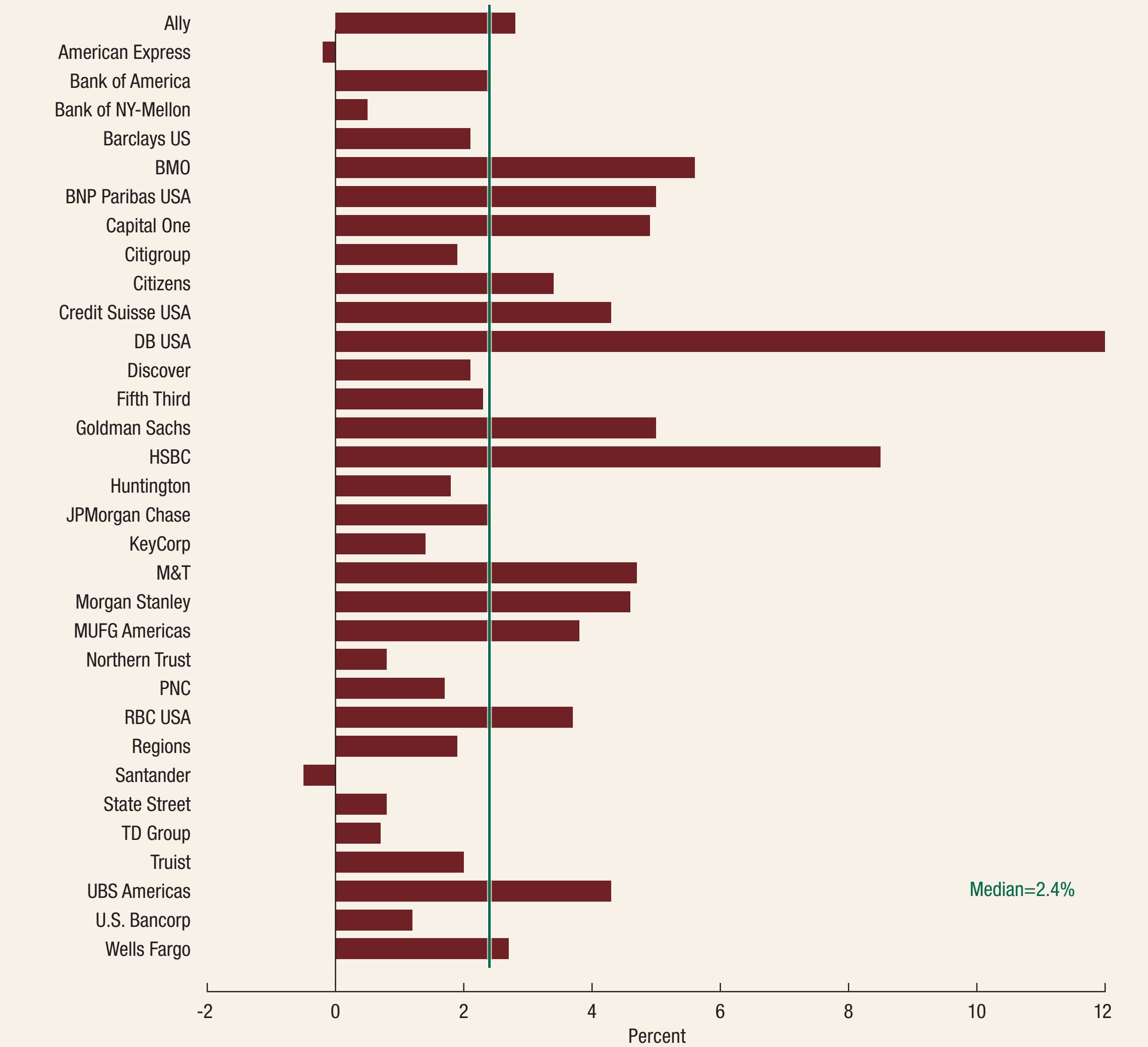
Firm	Common equity tier 1 capital ratio			Tier 1 capital ratio			Total capital ratio			Tier 1 leverage ratio			Supplementary leverage ratio[1]		
	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum	Actual 2020:Q2	Ending	Minimum
33 participating firms	12.2	9.9	9.7	13.8	11.5	11.4	16.4	14.1	14.1	7.9	6.5	6.4	7.4	5.3	5.2

Note: The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3.

[1] Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

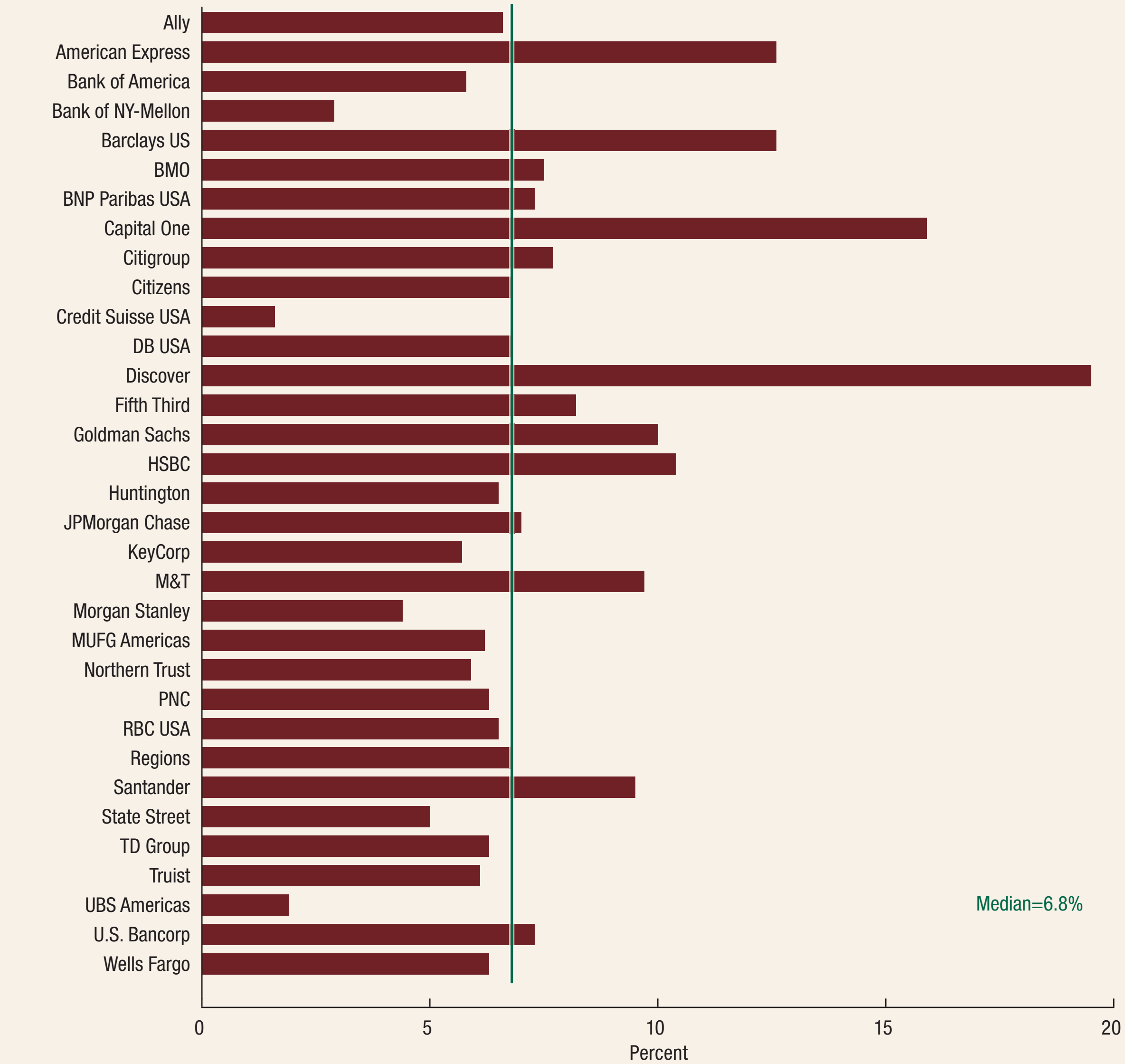
Source: Federal Reserve estimates in the alternative severe scenario.

Figure 16. Change from 2020:Q2 to minimum CET1 ratio in the alternative severe scenario



Note: Estimates are for the nine-quarter period from 2020:Q3–2022:Q3 as a percent of risk-weighted assets.

Figure 17. Total loan loss rates in the alternative severe scenario



Note: Estimates are for the nine-quarter period from 2020:Q3–2022:Q3 as a percent of average loan balances.

Table 12. Projected losses, revenue, and net income before taxes through 2022:Q3 under the alternative severe scenario: 33 participating firms

Billions of dollars

Firm	Sum of revenues		Minus sum of provisions and losses				Equals	Memo items	Other effects on capital
	Pre-provision net revenue[1]	Other revenue[2]	Provisions for loan and lease losses	Credit losses on investment securities (AFS/HTM)[3]	Trading and counterparty losses[4]	Other losses/ gains[5]	Net income before taxes	Other compre-hensive income[6]	AOCI included in capital (2022:Q3)
Ally Financial Inc.	3.7	0.0	7.3	0.3	0.0	0.1	-3.9	0.0	0.0
American Express Company	18.9	0.0	12.2	0.0	0.0	0.0	6.6	0.0	-2.9
Bank of America Corporation	32.7	0.0	53.4	0.1	11.3	2.6	-34.7	1.2	-0.3
The Bank of New York Mellon Corporation	7.6	0.0	1.7	0.2	1.4	0.0	4.3	-0.8	-2.7
Barclays US LLC	4.6	0.0	4.1	0.0	1.0	0.0	-0.5	0.0	0.0
BMO Financial Corp.	0.7	0.0	7.2	0.0	0.0	0.0	-6.5	0.0	0.0
BNP Paribas USA, Inc.	0.8	0.0	5.3	0.0	0.0	0.0	-4.6	0.0	0.0
Capital One Financial Corporation	23.1	0.0	34.9	0.0	0.0	0.2	-12.0	0.0	-0.1
Citigroup Inc.	48.2	0.0	40.2	0.5	10.3	1.8	-4.6	0.0	-35.5
Citizens Financial Group, Inc.	3.7	0.0	8.6	0.0	0.0	0.1	-5.0	0.0	0.0
Credit Suisse Holdings (USA), Inc.	1.0	0.0	0.1	0.0	2.6	0.2	-1.9	0.0	0.0
DB USA Corporation	-0.7	0.0	0.9	0.0	0.9	0.0	-2.6	0.0	-0.2
Discover Financial Services	13.6	0.0	14.3	0.0	0.0	0.0	-0.7	0.0	0.0
Fifth Third Bancorp	5.7	0.0	8.7	0.0	0.0	0.0	-3.0	0.0	0.0
The Goldman Sachs Group, Inc.	16.0	0.0	12.7	0.0	20.6	4.9	-22.2	-0.2	-0.5
HSBC North America Holdings Inc.	-0.4	0.0	7.6	0.1	1.2	0.0	-9.2	0.0	0.1
Huntington Bancshares Incorporated	3.2	0.0	4.3	0.0	0.0	0.1	-1.2	0.0	0.0
JPMorgan Chase & Co.	57.7	0.0	53.5	0.7	23.2	3.9	-23.6	-3.1	2.9
KeyCorp	4.0	0.0	5.2	0.0	0.0	0.3	-1.5	0.0	0.0
M&T Bank Corporation	4.3	0.0	9.1	0.0	0.0	0.1	-4.9	0.0	0.0
Morgan Stanley	5.1	0.0	8.0	0.1	10.1	4.8	-17.8	0.4	0.4
MUFG Americas Holdings Corporation	1.3	0.0	5.3	0.1	0.0	0.1	-4.1	0.0	0.0
Northern Trust Corporation	2.1	0.0	2.3	0.1	0.0	0.0	-0.3	0.0	0.3
The PNC Financial Services Group, Inc.	9.3	0.0	13.4	0.1	0.0	0.4	-4.7	0.0	0.0
RBC US Group Holdings LLC	1.8	0.0	4.4	0.3	0.0	0.0	-2.9	0.0	0.0
Regions Financial Corporation	3.6	0.0	5.3	0.0	0.0	0.0	-1.7	0.0	0.0
Santander Holdings USA, Inc.	7.2	0.0	4.5	0.0	0.0	0.5	2.2	0.0	0.0
State Street Corporation	4.0	0.0	1.6	0.1	1.0	0.0	1.3	-0.4	-0.9
TD Group US Holdings LLC	9.8	0.0	9.9	0.2	0.0	0.0	-0.3	0.0	0.0
Truist Financial Corporation	12.1	0.0	18.2	0.1	0.0	0.4	-6.6	0.0	0.0
UBS Americas Holding LLC	2.4	0.0	1.3	0.0	1.2	0.1	-0.2	0.0	0.0
U.S. Bancorp	16.8	0.0	20.4	0.0	0.0	0.0	-3.6	0.0	-0.1
Wells Fargo & Company	38.9	0.0	54.2	0.6	10.4	1.8	-28.1	-0.1	-0.7
33 participating firms	362.9	0.0	440.1	3.7	95.1	22.4	-198.4	-3.1	-40.4

Note: These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. Values may not sum precisely due to rounding.

1 Pre-provision net revenue includes losses from operational-risk events and other real estate owned costs.

2 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

3 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

4 Trading and counterparty losses include mark-to-market and credit valuation adjustments losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

5 Other losses/gains includes projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

6 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Source: Federal Reserve estimates in the alternative severe scenario.

Table 13. Projected loan losses by type of loan for 2020:Q3–2022:Q3 under the alternative severe scenario: 33 participating firms

Billions of dollars

Firm	Loan losses	First-lien mortgages, domestic	Junior liens and HELOCs, domestic	Commercial and industrial[1]	Commercial real estate, domestic	Credit cards	Other consumer[2]	Other loans[3]
Ally Financial Inc.	7.7	0.2	0.0	2.3	0.3	0.0	4.7	0.2
American Express Company	14.1	0.0	0.0	5.0	0.0	8.7	0.3	0.0
Bank of America Corporation	57.9	4.4	0.9	17.0	11.8	16.0	1.4	6.3
The Bank of New York Mellon Corporation	1.6	0.1	0.0	0.1	0.4	0.0	0.4	0.6
Barclays US LLC	4.6	0.0	0.0	0.0	0.0	4.4	0.0	0.1
BMO Financial Corp.	6.4	0.1	0.1	3.0	1.6	0.1	0.3	1.2
BNP Paribas USA, Inc.	4.8	0.2	0.1	1.5	1.6	0.1	1.0	0.4
Capital One Financial Corporation	39.7	0.0	0.0	4.6	1.9	25.2	6.8	1.1
Citigroup Inc.	52.7	1.7	0.7	10.5	2.6	28.0	2.1	7.2
Citizens Financial Group, Inc.	8.3	0.4	0.5	2.4	2.5	0.4	1.6	0.4
Credit Suisse Holdings (USA), Inc.	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1
DB USA Corporation	0.8	0.1	0.0	0.0	0.6	0.0	0.0	0.1
Discover Financial Services	17.4	0.0	0.1	0.0	0.0	15.6	1.6	0.0
Fifth Third Bancorp	9.0	0.4	0.2	3.5	3.1	0.6	0.7	0.4
The Goldman Sachs Group, Inc.	13.4	0.0	0.0	4.8	3.1	0.5	0.8	4.2
HSBC North America Holdings Inc.	7.2	0.5	0.1	2.0	3.6	0.4	0.0	0.6
Huntington Bancshares Incorporated	4.8	0.5	0.2	1.5	1.6	0.1	0.8	0.2
JPMorgan Chase & Co.	67.1	4.1	0.6	18.7	4.7	25.7	2.2	11.2
KeyCorp	5.7	0.3	0.2	2.3	1.6	0.2	0.5	0.5
M&T Bank Corporation	8.8	0.5	0.1	1.3	5.7	0.1	0.7	0.3
Morgan Stanley	7.1	0.5	0.0	1.2	2.1	0.0	0.2	3.0
MUFG Americas Holdings Corporation	5.2	0.9	0.1	1.7	1.4	0.1	0.6	0.5
Northern Trust Corporation	2.0	0.1	0.0	0.3	0.3	0.0	0.0	1.2
The PNC Financial Services Group, Inc.	15.4	0.4	0.3	6.7	4.5	1.4	0.9	1.2
RBC US Group Holdings LLC	3.8	0.4	0.0	0.9	1.5	0.0	0.2	0.7
Regions Financial Corporation	5.8	0.5	0.2	2.1	1.7	0.2	0.7	0.5
Santander Holdings USA, Inc.	8.5	0.2	0.2	0.8	1.0	0.1	6.1	0.2
State Street Corporation	1.3	0.0	0.0	0.3	0.1	0.0	0.0	0.9
TD Group US Holdings LLC	10.7	0.6	0.3	2.3	2.2	3.5	0.8	0.9
Truist Financial Corporation	18.4	1.0	0.4	4.4	6.6	0.6	3.7	1.8
UBS Americas Holding LLC	1.0	0.3	0.0	0.1	0.0	0.0	0.2	0.3
U.S. Bancorp	22.1	1.3	0.5	6.6	6.3	4.6	1.5	1.3
Wells Fargo & Company	57.8	4.7	0.7	13.2	17.9	7.5	3.7	10.0
33 participating firms	491.2	24.4	6.6	121.4	92.4	144.1	44.6	57.7

Note: These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. Values may not sum precisely due to rounding.

[1] Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

[2] Other consumer loans include student loans and automobile loans.

[3] Other loans include international real estate loans.

Source: Federal Reserve estimates in the alternative severe scenario.

Table 14. Projected loan losses by type of loan for 2020:Q3–2022:Q3 under the alternative severe scenario: 33 participating firms

Percent of average loan balances[1]

Firm	Loan losses	First-lien mortgages, domestic	Junior liens and HELOCs, domestic	Commercial and industrial[2]	Commercial real estate, domestic	Credit cards	Other consumer[3]	Other loans[4]
Ally Financial Inc.	6.6	1.3	3.7	8.0	5.4	0.0	7.2	14.4
American Express Company	12.6	0.0	0.0	13.8	0.0	11.9	15.8	5.7
Bank of America Corporation	5.8	1.9	2.3	5.9	15.5	19.0	1.9	3.3
The Bank of New York Mellon Corporation	2.9	1.2	7.2	3.0	8.4	0.0	11.4	1.8
Barclays US LLC	12.6	0.0	0.0	21.5	11.7	20.4	15.8	0.7
BMO Financial Corp.	7.5	1.8	3.5	8.0	14.3	19.4	4.5	6.2
BNP Paribas USA, Inc.	7.3	2.2	3.2	10.2	10.6	21.7	6.8	3.5
Capital One Financial Corporation	15.9	2.4	6.6	12.9	6.0	25.4	10.8	5.6
Citigroup Inc.	7.7	2.1	7.0	5.7	10.8	19.6	7.2	3.3
Citizens Financial Group, Inc.	6.8	2.2	4.1	6.3	14.5	22.6	6.1	6.3
Credit Suisse Holdings (USA), Inc.	1.6	0.0	0.0	0.0	45.2	0.0	15.8	0.6
DB USA Corporation	6.8	2.4	5.9	1.2	15.9	0.0	7.5	2.6
Discover Financial Services	19.5	2.4	9.5	25.7	20.2	22.3	9.1	5.6
Fifth Third Bancorp	8.2	2.5	3.7	7.8	19.7	26.3	4.7	4.4
The Goldman Sachs Group, Inc.	10.0	2.4	3.8	12.8	42.6	21.7	10.5	5.3
HSBC North America Holdings Inc.	10.4	2.9	7.9	6.8	31.9	33.0	10.7	7.5
Huntington Bancshares Incorporated	6.5	3.6	3.0	7.3	15.6	21.7	4.4	3.9
JPMorgan Chase & Co.	7.0	1.9	2.0	10.3	3.9	20.2	3.6	4.8
KeyCorp	5.7	2.7	3.8	6.0	10.8	21.7	4.7	3.0
M&T Bank Corporation	9.7	3.3	3.5	7.3	15.5	21.7	6.7	5.1
Morgan Stanley	4.4	1.6	3.8	8.6	16.8	0.0	0.9	3.7
MUFG Americas Holdings Corporation	6.2	2.7	3.3	10.4	7.4	21.7	16.1	4.5
Northern Trust Corporation	5.9	1.0	7.6	6.4	7.9	0.0	15.8	6.5
The PNC Financial Services Group, Inc.	6.3	1.4	1.8	7.1	12.4	23.8	3.8	3.1
RBC US Group Holdings LLC	6.5	3.0	3.3	11.2	10.2	21.7	12.9	3.8
Regions Financial Corporation	6.8	2.6	4.2	7.9	12.0	17.7	12.2	3.1
Santander Holdings USA, Inc.	9.5	2.7	3.7	5.0	6.6	21.7	15.9	2.5
State Street Corporation	5.0	0.0	0.0	6.8	5.8	0.0	0.6	4.6
TD Group US Holdings LLC	6.3	2.0	3.9	6.6	7.7	27.6	3.2	3.2
Truist Financial Corporation	6.1	1.9	2.6	6.1	11.2	17.5	6.7	3.8
UBS Americas Holding LLC	1.9	1.9	0.0	2.5	1.8	21.7	0.9	6.9
U.S. Bancorp	7.3	1.8	3.9	7.5	16.3	21.7	3.5	4.7
Wells Fargo & Company	6.3	1.8	1.9	7.3	14.0	21.0	5.1	5.0
33 participating firms	7.3	2.0	3.0	7.6	11.9	20.3	6.0	4.1

Note: These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. Values may not sum precisely due to rounding.

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

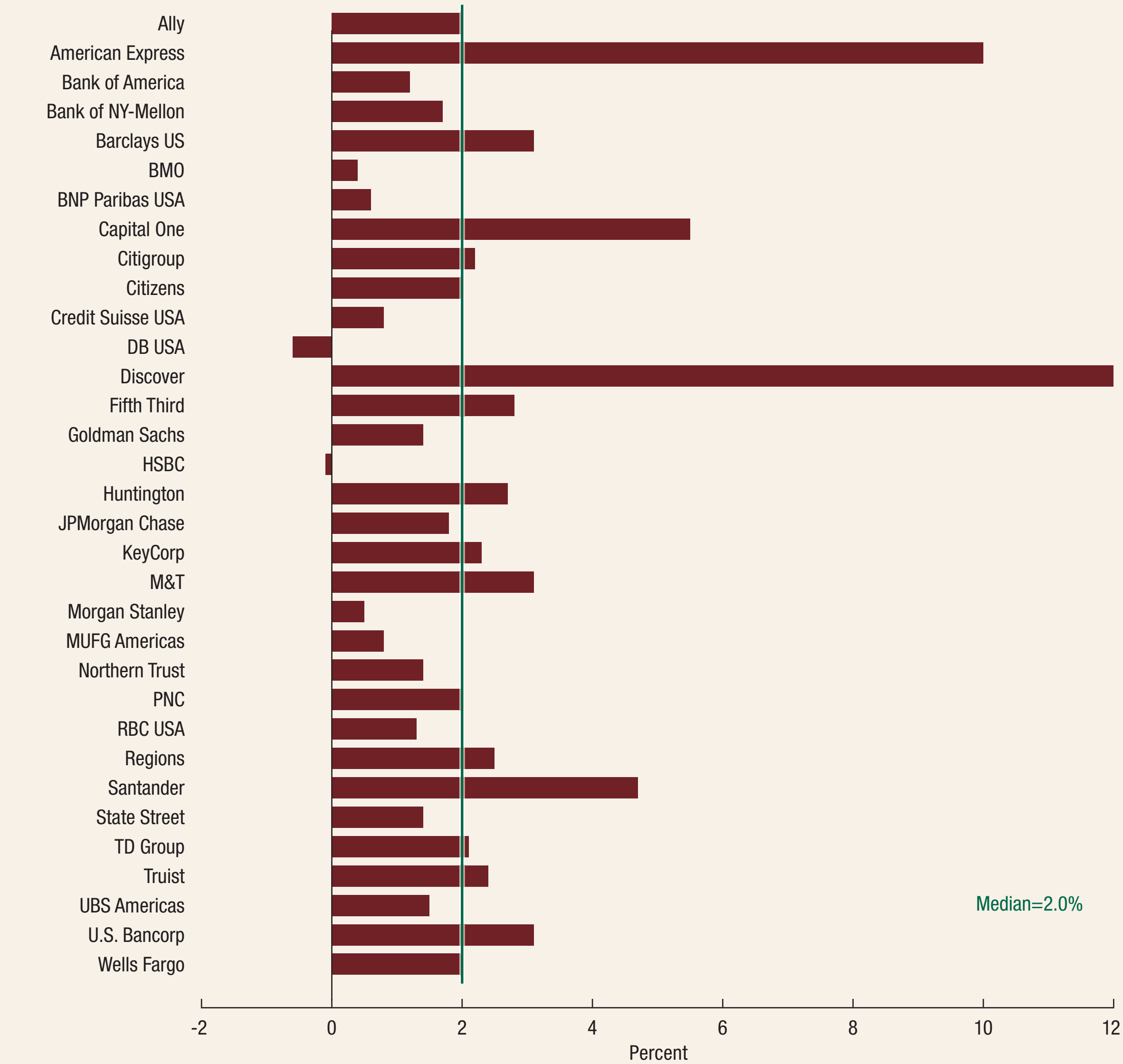
2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

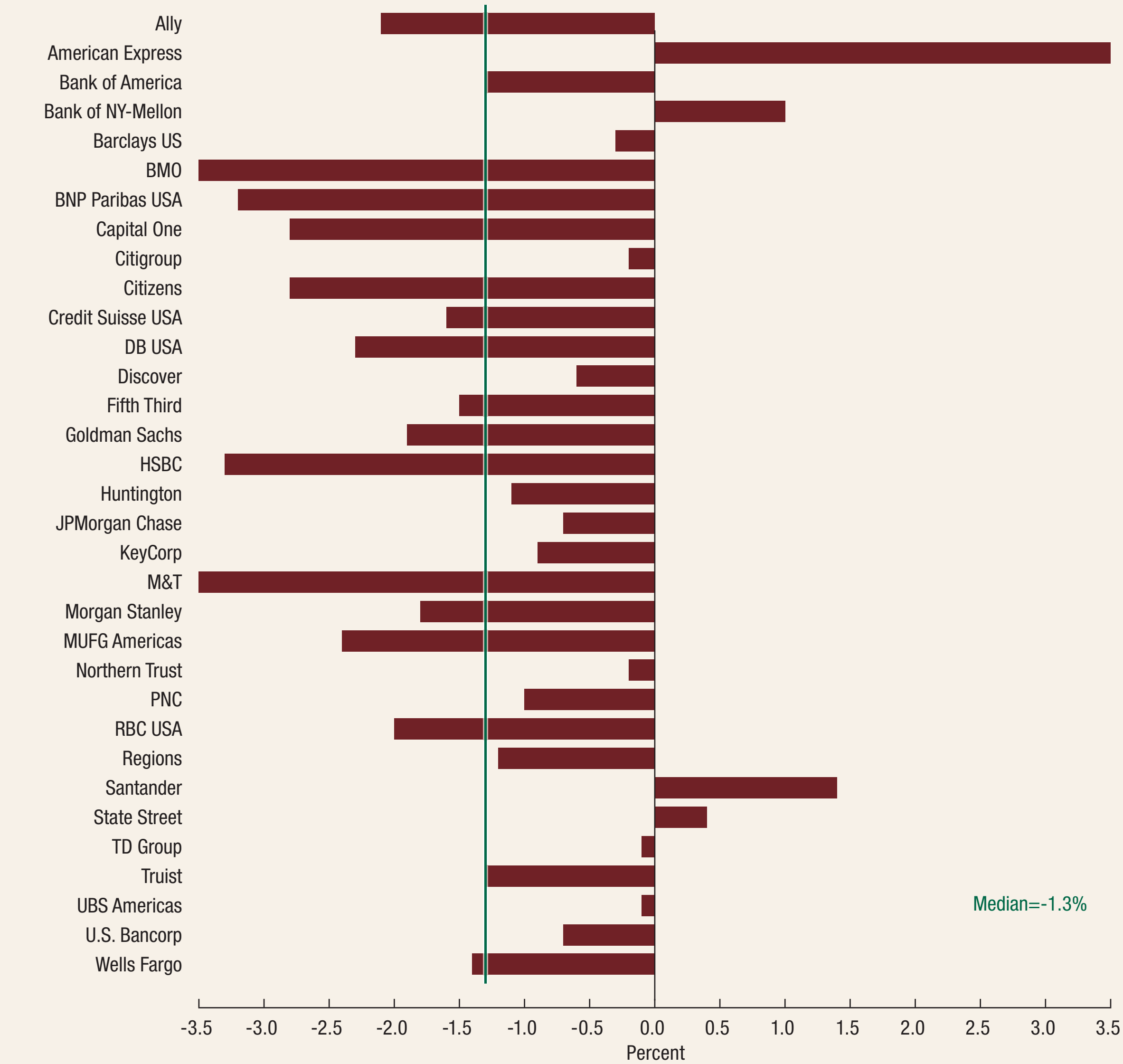
Source: Federal Reserve estimates in the alternative severe scenario.

Figure 18. PPNR rates in the alternative severe scenario



Note: Estimates are for the nine-quarter period from 2020:Q3–2022:Q3 as a percent of average assets.

Figure 19. Pre-tax net income rates in the alternative severe scenario



Note: Estimates are for the nine-quarter period from 2020:Q3–2022:Q3 as a percent of average assets.

Appendix A: Supervisory Scenarios

This appendix includes the historical data and scenarios provided by the Federal Reserve.

It is important to note that the severely adverse and alternative severe scenarios are not forecasts but rather are hypothetical scenarios designed to assess the strength of banking organizations and their resilience to adverse economic environments.

Table A.1. Historical data: Domestic variables, Q1:2000–Q2:2020
Percent, unless otherwise indicated.

Date	Real GDP growth	Nominal GDP growth	Real disposable income growth	Nominal disposable income growth	Unemployment rate	CPI inflation rate	3-month Treasury rate	5-year Treasury yield	10-year Treasury yield	BBB corporate yield	Mortgage rate	Prime rate	Level			
													Dow Jones Total Stock Market Index	House Price Index	Commercial Real Estate Price Index	Market Volatility Index
Q1 2000	1.5	4.2	7.9	11.5	4.0	4.0	5.5	6.6	6.7	8.3	8.3	8.7	14,296	102	127	27.0
Q2 2000	7.5	10.2	4.5	6.4	3.9	3.2	5.7	6.5	6.4	8.6	8.3	9.2	13,619	105	126	33.5
Q3 2000	0.5	2.8	4.7	7.3	4.0	3.7	6.0	6.1	6.1	8.2	8.0	9.5	13,613	107	139	21.9
Q4 2000	2.5	4.7	1.4	3.7	3.9	2.9	6.0	5.6	5.8	8.0	7.6	9.5	12,176	110	144	31.7
Q1 2001	-1.1	1.3	3.7	6.5	4.2	3.9	4.8	4.9	5.3	7.5	7.0	8.6	10,646	112	143	32.8
Q2 2001	2.4	4.9	-0.7	1.2	4.4	2.8	3.7	4.9	5.5	7.5	7.1	7.3	11,407	114	142	34.7
Q3 2001	-1.6	-0.1	9.6	9.8	4.8	1.1	3.2	4.6	5.3	7.2	7.0	6.6	9,563	116	144	43.7
Q4 2001	1.1	2.4	-5.0	-4.7	5.5	-0.3	1.9	4.2	5.1	7.1	6.8	5.2	10,708	118	139	35.3
Q1 2002	3.5	4.9	9.3	10.1	5.7	1.3	1.7	4.5	5.4	7.4	7.0	4.8	10,776	120	139	26.1
Q2 2002	2.4	3.9	2.7	5.9	5.8	3.2	1.7	4.5	5.4	7.5	6.8	4.8	9,384	124	140	28.4
Q3 2002	1.8	3.7	-0.3	1.6	5.7	2.2	1.6	3.4	4.5	7.2	6.3	4.8	7,774	127	141	45.1
Q4 2002	0.6	2.9	2.4	4.3	5.9	2.4	1.3	3.1	4.3	6.9	6.1	4.5	8,343	129	145	42.6
Q1 2003	2.2	4.1	0.9	3.8	5.9	4.2	1.2	2.9	4.2	6.2	5.8	4.3	8,052	132	152	34.7
Q2 2003	3.5	4.7	5.0	5.1	6.1	-0.7	1.0	2.6	3.8	5.3	5.5	4.2	9,342	135	151	29.1
Q3 2003	7.0	9.3	6.9	9.6	6.1	3.0	0.9	3.1	4.4	5.6	6.0	4.0	9,650	139	149	22.7
Q4 2003	4.7	7.2	1.1	2.9	5.8	1.5	0.9	3.2	4.4	5.4	5.9	4.0	10,800	143	147	21.1
Q1 2004	2.2	5.2	1.9	5.3	5.7	3.4	0.9	3.0	4.1	5.0	5.6	4.0	11,039	148	154	21.6
Q2 2004	3.1	6.5	4.7	7.6	5.6	3.2	1.1	3.7	4.7	5.7	6.1	4.0	11,145	154	164	20.0
Q3 2004	3.8	6.6	2.6	4.7	5.4	2.6	1.5	3.5	4.4	5.4	5.9	4.4	10,894	159	174	19.3
Q4 2004	4.1	7.3	5.1	8.8	5.4	4.4	2.0	3.5	4.3	5.1	5.7	4.9	11,952	165	179	16.6
Q1 2005	4.5	7.9	-4.6	-2.4	5.3	2.0	2.5	3.9	4.4	5.2	5.8	5.4	11,637	172	179	14.7
Q2 2005	1.9	4.7	3.9	6.4	5.1	2.7	2.9	3.9	4.2	5.4	5.7	5.9	11,857	179	185	17.7
Q3 2005	3.6	7.4	1.2	5.6	5.0	6.2	3.4	4.0	4.3	5.4	5.8	6.4	12,283	185	190	14.2
Q4 2005	2.5	5.9	5.2	8.6	5.0	3.8	3.8	4.4	4.6	5.8	6.2	7.0	12,497	190	198	16.5
Q1 2006	5.4	8.4	8.0	10.2	4.7	2.1	4.4	4.6	4.7	5.8	6.2	7.4	13,122	193	204	14.6
Q2 2006	0.9	4.4	1.0	4.3	4.6	3.7	4.7	5.0	5.2	6.3	6.6	7.9	12,809	193	212	23.8
Q3 2006	0.6	3.5	1.0	4.0	4.6	3.8	4.9	4.8	5.0	6.3	6.6	8.3	13,323	191	220	18.6
Q4 2006	3.5	5.0	5.4	4.7	4.4	-1.6	4.9	4.6	4.7	6.0	6.2	8.3	14,216	191	222	12.7
Q1 2007	0.9	5.0	3.4	7.4	4.5	4.0	5.0	4.6	4.8	6.0	6.2	8.3	14,354	189	230	19.6
Q2 2007	2.3	5.0	1.0	4.3	4.5	4.6	4.7	4.7	4.9	6.2	6.4	8.3	15,163	183	239	18.9
Q3 2007	2.2	4.3	0.4	2.6	4.7	2.6	4.3	4.5	4.8	6.5	6.6	8.2	15,318	178	247	30.8
Q4 2007	2.5	4.1	0.3	4.3	4.8	5.0	3.4	3.8	4.4	6.3	6.2	7.5	14,754	172	247	31.1

(continued)

Table A.1.—*continued*

Date	Real GDP growth	Nominal GDP growth	Real disposable income growth	Nominal disposable income growth	Unemployment rate	CPI inflation rate	3-month Treasury rate	5-year Treasury yield	10-year Treasury yield	BBB corporate yield	Mortgage rate	Prime rate	Level			
													Dow Jones Total Stock Market Index	House Price Index	Commercial Real Estate Price Index	Market Volatility Index
Q1 2008	-2.3	-0.8	1.1	4.6	5.0	4.4	2.1	2.8	3.9	6.4	5.9	6.2	13,284	165	234	32.2
Q2 2008	2.1	4.3	7.5	12.0	5.3	5.3	1.6	3.2	4.1	6.7	6.1	5.1	13,016	157	224	24.1
Q3 2008	-2.1	0.8	-8.1	-4.3	6.0	6.3	1.5	3.1	4.1	7.1	6.3	5.0	11,826	150	230	46.7
Q4 2008	-8.4	-7.2	3.5	-2.5	6.9	-8.9	0.3	2.2	3.7	9.7	5.8	4.1	9,057	143	219	80.9
Q1 2009	-4.4	-4.5	-1.7	-4.0	8.3	-2.7	0.2	1.9	3.2	9.1	5.1	3.3	8,044	138	209	56.7
Q2 2009	-0.6	-1.2	4.4	6.3	9.3	2.1	0.2	2.3	3.7	8.1	5.0	3.3	9,343	138	180	42.3
Q3 2009	1.5	1.9	-4.4	-1.8	9.6	3.5	0.2	2.5	3.8	6.5	5.2	3.3	10,813	139	161	31.3
Q4 2009	4.5	5.9	-0.1	3.0	9.9	3.2	0.1	2.3	3.7	5.8	4.9	3.3	11,385	139	159	30.7
Q1 2010	1.5	2.6	2.3	3.7	9.8	0.6	0.1	2.4	3.9	5.6	5.0	3.3	12,033	139	154	27.3
Q2 2010	3.7	5.7	6.8	7.2	9.6	-0.1	0.1	2.3	3.6	5.4	4.9	3.3	10,646	139	167	45.8
Q3 2010	3.0	4.2	2.9	3.6	9.5	1.2	0.2	1.6	2.9	4.8	4.4	3.3	11,814	136	167	32.9
Q4 2010	2.0	4.3	2.3	4.8	9.5	3.3	0.1	1.5	3.0	4.7	4.4	3.3	13,132	135	168	23.5
Q1 2011	-1.0	1.2	4.1	7.8	9.0	4.3	0.1	2.1	3.5	5.0	4.8	3.3	13,909	133	171	29.4
Q2 2011	2.9	5.6	-0.9	3.1	9.1	4.6	0.0	1.8	3.3	4.8	4.7	3.3	13,844	133	173	22.7
Q3 2011	-0.1	2.5	1.8	3.7	9.0	2.6	0.0	1.1	2.5	4.5	4.3	3.3	11,677	134	169	48.0
Q4 2011	4.7	5.4	1.2	2.6	8.6	1.8	0.0	1.0	2.1	4.8	4.0	3.3	13,019	134	176	45.5
Q1 2012	3.2	5.8	7.7	10.7	8.3	2.3	0.1	0.9	2.1	4.4	3.9	3.3	14,628	135	180	23.0
Q2 2012	1.7	3.3	3.7	4.7	8.2	0.8	0.1	0.8	1.8	4.3	3.8	3.3	14,100	138	178	26.7
Q3 2012	0.5	2.6	-2.8	-1.7	8.0	1.8	0.1	0.7	1.6	3.9	3.6	3.3	14,895	141	184	20.5
Q4 2012	0.5	2.5	11.5	14.1	7.8	2.7	0.1	0.7	1.7	3.6	3.4	3.3	14,835	144	184	22.7
Q1 2013	3.6	5.3	-15.1	-13.9	7.7	1.6	0.1	0.8	1.9	3.7	3.5	3.3	16,396	148	188	19.0
Q2 2013	0.5	1.7	3.0	3.3	7.5	-0.4	0.1	0.9	2.0	3.8	3.7	3.3	16,771	152	197	20.5
Q3 2013	3.2	5.2	1.7	3.4	7.2	2.2	0.0	1.5	2.7	4.7	4.4	3.3	17,718	155	207	17.0
Q4 2013	3.2	5.7	1.6	3.3	6.9	1.5	0.1	1.4	2.8	4.5	4.3	3.3	19,413	158	211	20.3
Q1 2014	-1.1	0.5	5.7	7.7	6.7	2.5	0.0	1.6	2.8	4.4	4.4	3.3	19,711	160	209	21.4
Q2 2014	5.5	7.9	5.6	7.6	6.2	2.1	0.0	1.7	2.7	4.0	4.2	3.3	20,569	161	214	17.0
Q3 2014	5.0	6.8	4.8	5.9	6.1	1.0	0.0	1.7	2.5	3.9	4.1	3.3	20,459	164	218	17.0
Q4 2014	2.3	2.9	5.4	4.9	5.7	-1.0	0.0	1.6	2.3	4.0	4.0	3.3	21,425	166	226	26.3
Q1 2015	3.9	3.5	6.1	4.3	5.5	-2.6	0.0	1.5	2.0	3.9	3.7	3.3	21,708	168	240	22.4
Q2 2015	2.7	5.0	1.1	3.2	5.4	2.8	0.0	1.5	2.2	3.9	3.8	3.3	21,631	170	243	18.9
Q3 2015	1.5	2.7	2.8	3.9	5.1	1.5	0.0	1.6	2.3	4.3	4.0	3.3	19,959	173	245	40.7
Q4 2015	0.6	0.7	2.3	2.0	5.0	0.0	0.1	1.6	2.2	4.4	3.9	3.3	21,101	175	246	24.4
Q1 2016	2.3	2.0	3.1	3.4	4.9	-0.1	0.3	1.4	2.0	4.5	3.7	3.5	21,179	177	238	28.1
Q2 2016	1.3	4.1	-0.3	2.1	4.9	2.9	0.3	1.3	1.8	3.9	3.6	3.5	21,622	179	242	25.8
Q3 2016	2.2	3.6	1.9	3.6	4.9	1.9	0.3	1.2	1.6	3.5	3.4	3.5	22,469	182	254	18.1
Q4 2016	2.5	4.6	2.5	4.4	4.8	2.6	0.4	1.7	2.2	3.9	3.8	3.5	23,277	185	258	22.5
Q1 2017	2.3	4.4	4.3	6.6	4.6	2.8	0.6	2.0	2.5	4.0	4.2	3.8	24,508	187	255	13.1
Q2 2017	1.7	3.0	4.4	5.3	4.4	0.4	0.9	1.8	2.3	3.8	4.0	4.0	25,125	190	264	16.0
Q3 2017	2.9	5.0	2.7	4.4	4.3	2.2	1.0	1.8	2.3	3.7	3.9	4.3	26,149	193	268	16.0
Q4 2017	3.9	6.7	2.3	5.0	4.1	3.1	1.2	2.1	2.4	3.7	3.9	4.3	27,673	196	277	13.1
Q1 2018	3.8	6.2	5.2	8.0	4.1	3.2	1.6	2.5	2.8	4.1	4.3	4.5	27,383	199	272	37.3
Q2 2018	2.7	6.3	3.6	5.9	3.9	2.2	1.8	2.8	2.9	4.5	4.5	4.8	28,314	201	286	23.6
Q3 2018	2.1	3.8	3.3	4.9	3.8	2.1	2.0	2.8	2.9	4.5	4.6	5.0	30,190	203	278	16.1
Q4 2018	1.3	3.3	2.8	4.2	3.8	1.3	2.3	2.9	3.0	4.8	4.8	5.3	25,725	205	280	36.1
Q1 2019	2.9	4.0	3.3	3.9	3.9	0.9	2.4	2.5	2.7	4.5	4.4	5.5	29,194	206	288	25.5
Q2 2019	1.5	4.1	-1.0	1.5	3.6	3.0	2.3	2.1	2.4	4.0	4.0	5.5	30,244	208	301	20.6
Q3 2019	2.6	4.0	2.1	3.5	3.6	1.8	2.0	1.7	1.8	3.4	3.7	5.3	30,442	210	309	24.6
Q4 2019	2.4	3.9	1.9	3.4	3.5	2.4	1.6	1.6	1.8	3.3	3.7	4.8	33,035	213	301	20.6
Q1 2020	-5.0	-3.4	2.6	3.9	3.8	1.2	1.1	1.2	1.4	3.4	3.5	4.4	25,985	213	304	82.7
Q2 2020	-31.7	-33.3	47.0	44.4	13.0	-3.5	0.1	0.4	0.7	3.4	3.2	3.3	31,577	216	305	57.1

Note: Refer to Notes Regarding Scenario Variables for more information on the definitions and sources of historical observations of the variables in the table.

Table A.2. Historical data: International variables, Q1:2000–Q2:2020
Percent, unless otherwise indicated.

Date	Euro area real GDP growth	Euro area inflation	Euro area bilateral dollar exchange rate (USD/euro)	Developing Asia real GDP growth	Developing Asia inflation	Developing Asia bilateral dollar exchange rate (F/USD, index)	Japan real GDP growth	Japan inflation	Japan bilateral dollar exchange rate (yen/USD)	U.K. real GDP growth	U.K. inflation	U.K. bilateral dollar exchange rate (USD/pound)
Q1 2000	4.9	2.6	0.957	7.3	1.5	100.0	7.4	-0.5	102.7	3.1	0.5	1.592
Q2 2000	3.6	0.9	0.955	6.9	-0.3	100.7	1.1	-1.1	106.1	2.3	0.4	1.513
Q3 2000	2.3	3.4	0.884	7.8	2.2	101.4	0.3	-0.3	107.9	1.1	1.0	1.479
Q4 2000	2.7	2.8	0.939	3.6	2.5	105.2	4.0	-1.1	114.4	0.6	1.9	1.496
Q1 2001	4.1	1.2	0.879	4.8	1.7	106.1	2.2	0.7	125.5	5.8	0.1	1.419
Q2 2001	0.4	4.0	0.847	5.3	2.1	106.2	-2.0	-2.3	124.7	3.4	3.1	1.408
Q3 2001	0.6	1.5	0.910	4.9	1.3	106.5	-4.0	-0.5	119.2	3.2	1.0	1.469
Q4 2001	0.5	1.7	0.890	8.4	0.0	106.9	-1.2	-1.9	131.0	1.5	0.0	1.454
Q1 2002	0.2	3.1	0.872	7.8	0.5	107.4	0.7	-1.1	132.7	1.8	1.9	1.425
Q2 2002	2.2	2.0	0.986	8.1	1.1	104.8	3.0	0.1	119.9	2.0	0.9	1.525
Q3 2002	1.7	1.6	0.988	7.3	1.5	105.5	1.3	-0.4	121.7	3.1	1.4	1.570
Q4 2002	0.7	2.3	1.049	6.7	0.8	104.5	1.0	-0.8	118.8	3.5	1.9	1.610
Q1 2003	-1.4	3.3	1.090	6.6	3.6	105.5	0.3	0.0	118.1	2.7	1.6	1.579
Q2 2003	0.4	0.5	1.150	1.9	1.1	104.0	2.5	0.3	119.9	3.8	0.3	1.653
Q3 2003	2.3	2.1	1.165	14.6	0.1	102.6	1.6	-0.5	111.4	4.2	1.7	1.662
Q4 2003	3.0	2.3	1.260	12.8	5.5	103.4	4.5	-1.0	107.1	3.4	1.6	1.784
Q1 2004	2.0	2.2	1.229	5.8	4.0	101.4	2.9	0.8	104.2	2.2	1.3	1.840
Q2 2004	2.4	2.6	1.218	7.1	4.1	102.8	0.1	-0.4	109.4	1.4	1.0	1.813
Q3 2004	1.0	2.0	1.242	8.2	4.1	102.7	2.5	-0.1	110.2	0.7	1.1	1.809
Q4 2004	1.4	2.4	1.354	6.3	0.8	98.9	-0.8	1.9	102.7	1.3	2.4	1.916
Q1 2005	1.0	1.4	1.297	10.6	2.9	98.5	2.0	-1.2	107.2	3.4	2.5	1.889
Q2 2005	2.3	2.2	1.210	8.7	1.5	98.9	2.7	-1.0	110.9	5.1	1.9	1.793
Q3 2005	3.0	3.1	1.206	9.4	2.4	98.5	3.9	-1.0	113.3	4.6	2.7	1.770
Q4 2005	2.5	2.5	1.184	11.6	1.6	98.1	0.7	0.1	117.9	6.1	1.4	1.719
Q1 2006	3.7	1.7	1.214	10.9	2.4	96.7	0.7	1.2	117.5	1.6	1.9	1.739
Q2 2006	4.4	2.5	1.278	7.2	3.2	96.6	1.0	0.4	114.5	1.0	3.0	1.849
Q3 2006	2.3	2.0	1.269	10.1	2.2	96.2	-0.7	0.4	118.0	0.4	3.3	1.872
Q4 2006	4.8	0.9	1.320	11.4	3.6	94.5	5.3	-0.5	119.0	2.1	2.6	1.959
Q1 2007	2.6	2.3	1.337	13.9	3.6	93.9	3.0	-0.7	117.6	3.8	2.6	1.969
Q2 2007	2.8	2.3	1.352	10.6	4.9	91.8	0.5	0.4	123.4	2.5	1.7	2.006
Q3 2007	1.7	2.1	1.422	8.6	7.6	90.5	-1.9	0.3	115.0	3.1	0.2	2.039
Q4 2007	2.3	4.9	1.460	13.1	5.9	89.4	1.9	2.2	111.7	1.9	4.0	1.984
Q1 2008	1.8	4.2	1.581	7.1	8.1	88.0	1.0	1.2	99.9	2.2	3.7	1.986
Q2 2008	-1.4	3.2	1.575	6.0	6.3	88.7	-1.5	1.8	106.2	-2.2	5.7	1.991
Q3 2008	-2.1	3.2	1.408	2.9	3.0	91.6	-4.9	3.4	105.9	-6.1	5.8	1.780
Q4 2008	-6.8	-1.4	1.392	0.6	-1.1	92.3	-9.4	-2.1	90.8	-8.0	0.5	1.462
Q1 2009	-12.0	-1.0	1.326	4.2	-1.4	94.3	-17.8	-3.6	99.2	-6.8	-0.1	1.430
Q2 2009	-0.1	0.0	1.402	15.0	2.3	92.3	8.6	-1.6	96.4	-1.0	2.2	1.645
Q3 2009	1.5	1.1	1.463	12.6	4.1	91.3	0.2	-1.4	89.5	0.3	3.5	1.600
Q4 2009	1.9	1.6	1.433	9.7	5.0	90.7	5.6	-1.5	93.1	1.2	3.0	1.617
Q1 2010	1.6	1.8	1.353	9.7	4.4	89.8	3.5	1.0	93.4	2.6	4.0	1.519
Q2 2010	4.0	1.9	1.229	9.5	3.4	91.1	5.5	-1.4	88.5	4.1	3.2	1.495
Q3 2010	1.8	1.6	1.360	8.7	4.2	88.4	7.4	-1.9	83.5	2.7	2.3	1.573
Q4 2010	2.5	2.6	1.327	9.6	7.5	87.4	-3.2	1.3	81.7	0.3	4.0	1.539
Q1 2011	3.4	3.7	1.418	9.7	6.2	86.5	-5.5	-0.1	82.8	2.5	6.7	1.605
Q2 2011	0.1	3.1	1.452	6.8	5.4	85.3	-2.6	-0.7	80.6	0.4	4.7	1.607
Q3 2011	0.4	1.3	1.345	5.6	5.3	87.4	10.3	0.3	77.0	1.2	3.7	1.562
Q4 2011	-1.5	3.5	1.297	6.5	3.0	87.3	-0.6	-0.6	77.0	0.7	3.4	1.554
Q1 2012	-0.9	2.9	1.333	7.7	3.2	86.3	4.9	2.2	82.4	2.6	2.1	1.599
Q2 2012	-1.2	2.2	1.267	5.8	3.9	88.1	-2.9	-1.4	79.8	-0.3	2.0	1.569

(continued)

Table A.2.—*continued*

Date	Euro area real GDP growth	Euro area inflation	Euro area bilateral dollar exchange rate (USD/euro)	Developing Asia real GDP growth	Developing Asia inflation	Developing Asia bilateral dollar exchange rate (F/USD, index)	Japan real GDP growth	Japan inflation	Japan bilateral dollar exchange rate (yen/USD)	U.K. real GDP growth	U.K. inflation	U.K. bilateral dollar exchange rate (USD/pound)
Q3 2012	-0.5	1.5	1.286	6.6	2.2	86.3	-1.5	-1.9	77.9	5.0	2.2	1.613
Q4 2012	-1.6	2.5	1.319	7.2	3.5	86.0	1.1	0.1	86.6	-0.6	4.0	1.626
Q1 2013	-1.6	1.3	1.282	6.8	4.6	86.3	5.0	0.6	94.2	2.6	2.9	1.519
Q2 2013	2.2	0.2	1.301	6.3	2.8	87.2	3.1	0.0	99.2	2.2	1.7	1.521
Q3 2013	1.3	1.1	1.354	7.7	3.5	86.6	3.4	2.7	98.3	3.8	2.1	1.618
Q4 2013	1.0	0.5	1.378	6.8	4.0	85.8	-0.1	2.6	105.3	2.1	1.6	1.657
Q1 2014	1.8	1.0	1.378	6.3	1.4	86.9	4.0	1.0	103.0	2.7	1.9	1.668
Q2 2014	0.7	-0.3	1.369	7.4	2.6	86.7	-7.5	8.3	101.3	2.6	1.4	1.711
Q3 2014	1.9	0.1	1.263	6.5	2.4	87.0	0.4	1.8	109.7	2.3	0.7	1.622
Q4 2014	1.6	-0.1	1.210	5.7	1.1	88.1	2.0	-0.8	119.9	2.3	-0.4	1.558
Q1 2015	2.7	-0.7	1.074	6.4	0.9	88.1	5.6	0.4	120.0	2.1	-1.1	1.485
Q2 2015	1.8	2.5	1.115	6.9	2.7	88.5	0.4	0.8	122.1	2.9	0.7	1.573
Q3 2015	1.8	-0.2	1.116	6.4	2.7	91.1	-0.2	0.5	119.8	1.7	0.6	1.512
Q4 2015	1.8	-0.4	1.086	5.5	1.2	92.3	-1.5	-1.1	120.3	3.0	0.1	1.475
Q1 2016	2.3	-1.4	1.139	7.1	3.0	91.8	2.1	-0.4	112.4	0.7	0.1	1.438
Q2 2016	1.0	1.5	1.103	7.0	2.9	94.3	0.5	-0.1	102.8	2.1	0.7	1.324
Q3 2016	1.8	1.2	1.124	6.5	1.2	93.7	0.9	-0.4	101.2	1.8	2.0	1.302
Q4 2016	3.1	1.7	1.055	5.8	1.7	97.6	1.2	2.0	116.8	2.6	2.1	1.234
Q1 2017	3.0	2.7	1.070	6.3	1.2	95.2	4.8	-0.5	111.4	2.3	3.8	1.254
Q2 2017	2.7	0.5	1.141	6.5	2.2	94.8	1.2	0.7	112.4	1.0	3.1	1.300
Q3 2017	3.3	0.9	1.181	6.7	2.3	93.7	2.3	0.4	112.6	1.4	2.3	1.340
Q4 2017	3.4	1.5	1.202	6.4	2.6	91.1	1.9	1.9	112.7	1.6	3.0	1.353
Q1 2018	0.8	2.2	1.232	7.0	2.4	89.1	-1.7	2.3	106.2	0.2	2.5	1.403
Q2 2018	1.4	2.2	1.168	5.7	1.8	93.5	1.5	-1.8	110.7	2.1	1.9	1.320
Q3 2018	0.6	2.5	1.162	4.6	3.0	97.2	-3.2	2.3	113.5	2.4	2.5	1.305
Q4 2018	1.8	0.8	1.146	6.3	1.1	96.2	2.3	0.4	109.7	0.9	2.1	1.276
Q1 2019	2.1	0.2	1.123	6.3	1.1	94.7	2.8	0.1	110.7	2.7	1.0	1.303
Q2 2019	0.5	2.1	1.137	4.8	5.0	96.4	1.6	0.7	107.8	-0.2	2.6	1.270
Q3 2019	1.3	0.6	1.091	2.9	3.5	99.8	0.2	0.3	108.1	2.1	1.6	1.231
Q4 2019	0.2	1.0	1.123	6.6	6.5	98.0	-7.0	0.9	108.7	0.0	0.4	1.327
Q1 2020	-14.1	0.7	1.102	-25.7	3.8	101.9	-2.3	0.3	107.5	-8.5	2.0	1.245
Q2 2020	-39.4	-1.4	1.124	34.1	-2.1	97.3	-28.1	-1.2	107.8	-59.8	-1.5	1.237

Note: Refer to Notes Regarding Scenario Variables for more information on the definitions and sources of historical observations of the variables in the table.

Table A.3. Supervisory baseline scenario: Domestic variables, Q3:2020–Q3:2023
Percent, unless otherwise indicated.

Date	Real GDP growth	Nominal GDP growth	Real disposable income growth	Nominal disposable income growth	Unemployment rate	CPI inflation rate	3-month Treasury rate	5-year Treasury yield	10-year Treasury yield	BBB corporate yield	Mortgage rate	Prime rate	Level			
													Dow Jones Total Stock Market Index	House Price Index	Commercial Real Estate Price Index	Market Volatility Index
Q3 2020	24.0	26.7	-14.4	-12.7	9.5	3.7	0.1	0.3	0.6	2.4	3.0	3.3	34,528	218	305	33.6
Q4 2020	4.9	6.4	-3.3	-1.6	8.7	1.9	0.1	0.4	0.8	2.4	2.8	3.2	34,805	220	299	28.9
Q1 2021	4.6	6.4	-4.8	-3.0	8.1	2.1	0.1	0.4	0.9	2.5	2.7	3.2	35,090	222	293	26.9
Q2 2021	4.2	6.0	1.3	3.0	7.5	1.9	0.2	0.5	0.9	2.5	2.7	3.2	35,385	224	284	26.3
Q3 2021	4.1	5.8	2.2	4.0	7.0	2.0	0.2	0.6	1.0	2.6	2.7	3.2	35,683	226	274	26.2
Q4 2021	3.6	5.4	1.5	3.3	6.6	2.0	0.2	0.7	1.1	2.7	2.7	3.2	35,986	228	277	26.2
Q1 2022	3.3	4.4	3.4	5.6	6.3	2.3	0.4	0.8	1.2	2.8	2.8	3.4	36,295	231	279	26.3
Q2 2022	3.0	4.0	2.1	4.1	6.0	2.2	0.5	0.9	1.3	3.0	2.9	3.6	36,610	233	282	26.3
Q3 2022	2.8	4.0	2.1	4.1	5.8	2.2	0.7	1.0	1.5	3.1	3.0	3.7	36,930	235	285	26.3
Q4 2022	2.7	4.0	2.1	4.1	5.7	2.2	0.8	1.1	1.6	3.2	3.1	3.8	37,256	237	288	26.3
Q1 2023	2.5	4.0	2.1	4.1	5.5	2.2	0.9	1.2	1.7	3.4	3.2	3.9	37,588	239	290	26.4
Q2 2023	2.4	4.0	2.1	4.1	5.4	2.2	1.0	1.3	1.8	3.5	3.3	4.0	37,924	242	293	26.4
Q3 2023	2.3	4.0	2.1	4.1	5.3	2.2	1.1	1.3	1.9	3.5	3.4	4.1	38,266	244	296	26.4

Note: Refer to Notes Regarding Scenario Variables for more information on the definitions and sources of historical observations of the variables in the table.

Table A.4. Supervisory baseline scenario: International variables, Q3:2020–Q3:2023
Percent, unless otherwise indicated.

Date	Euro area real GDP growth	Euro area inflation	Euro area bilateral dollar exchange rate (USD/euro)	Developing Asia real GDP growth	Developing Asia inflation	Developing Asia bilateral dollar exchange rate (F/USD, index)	Japan real GDP growth	Japan inflation	Japan bilateral dollar exchange rate (yen/USD)	U.K. real GDP growth	U.K. inflation	U.K. bilateral dollar exchange rate (USD/pound)
Q3 2020	35.0	0.2	1.149	1.0	2.1	98.3	20.0	-1.3	107.1	80.0	-0.1	1.265
Q4 2020	18.7	1.0	1.174	1.6	2.0	99.3	4.9	-1.0	106.3	16.3	2.5	1.294
Q1 2021	3.3	1.2	1.182	6.2	3.3	99.1	2.3	0.8	106.4	6.1	1.1	1.310
Q2 2021	1.2	1.5	1.190	10.7	2.1	98.8	1.0	1.3	106.5	1.4	1.7	1.326
Q3 2021	2.5	1.3	1.198	8.8	2.5	98.6	2.1	0.9	106.6	2.8	1.8	1.343
Q4 2021	3.7	1.2	1.206	6.9	2.9	98.3	3.1	0.6	106.7	4.2	1.8	1.359
Q1 2022	5.0	1.0	1.206	4.8	3.3	98.3	4.1	0.2	106.7	5.6	1.9	1.359
Q2 2022	4.3	1.1	1.206	5.0	3.3	98.3	3.6	0.2	106.7	5.0	2.0	1.359
Q3 2022	3.7	1.1	1.206	5.2	3.3	98.3	3.2	0.2	106.7	4.4	2.0	1.359
Q4 2022	3.2	1.2	1.206	5.5	3.3	98.3	2.7	0.2	106.7	3.8	2.1	1.359
Q1 2023	2.6	1.2	1.206	5.7	3.4	98.3	2.3	0.3	106.7	3.2	2.2	1.359
Q2 2023	1.9	1.3	1.206	7.2	2.9	98.3	1.7	0.6	106.7	2.4	2.1	1.359
Q3 2023	1.3	1.4	1.206	8.9	2.5	98.3	1.1	0.9	106.7	1.6	1.9	1.359

Note: Refer to Notes Regarding Scenario Variables for more information on the definitions and sources of historical observations of the variables in the table.

Table A.5. Supervisory severely adverse scenario: Domestic variables, Q3:2020–Q3:2023
Percent, unless otherwise indicated.

Date	Real GDP growth	Nominal GDP growth	Real dispo-sable income growth	Nominal dispo-sable income growth	Unem-ployment rate	CPI inflation rate	3-month Treasury rate	5-year Treasury yield	10-year Treasury yield	BBB corporate yield	Mortgage rate	Prime rate	Level			
													Dow Jones Total Stock Market Index	House Price Index	Com-mercial Real Estate Price Index	Market Volatility Index
Q3 2020	24.0	26.5	-12.3	-10.6	9.5	3.6	0.1	0.2	0.3	2.1	2.7	3.3	35,961	220	305	33.6
Q4 2020	-5.9	-5.3	-14.2	-13.4	10.5	1.2	0.1	0.2	0.3	5.0	3.7	3.2	25,124	208	298	70.0
Q1 2021	-3.6	-2.6	-12.8	-11.8	11.3	1.4	0.1	0.2	0.3	5.7	3.8	3.2	19,841	198	291	68.1
Q2 2021	-2.5	-1.8	-5.6	-4.6	11.9	1.2	0.1	0.2	0.4	6.1	3.9	3.2	18,009	190	282	64.3
Q3 2021	-0.2	0.4	-3.1	-1.9	12.2	1.4	0.1	0.2	0.5	5.7	3.8	3.2	18,530	182	268	53.6
Q4 2021	-0.2	0.7	-2.4	-1.2	12.5	1.4	0.1	0.2	0.6	5.4	3.7	3.2	19,275	174	255	46.8
Q1 2022	5.7	6.2	3.5	5.5	12.0	2.1	0.1	0.3	0.7	5.1	3.6	3.2	20,479	168	241	41.8
Q2 2022	8.2	8.6	3.7	5.7	11.3	2.2	0.1	0.4	0.8	4.8	3.5	3.2	21,952	163	227	37.8
Q3 2022	10.8	11.1	5.3	7.6	10.2	2.3	0.1	0.4	1.0	4.5	3.5	3.2	23,779	161	218	34.3
Q4 2022	10.8	11.3	5.6	7.8	9.2	2.3	0.1	0.5	1.1	4.2	3.4	3.2	25,918	161	213	32.1
Q1 2023	8.2	8.9	4.2	6.2	8.4	2.1	0.1	0.6	1.2	3.9	3.3	3.2	28,338	164	213	30.4
Q2 2023	5.7	6.7	2.7	4.5	8.0	2.0	0.1	0.7	1.4	3.6	3.3	3.2	31,069	165	214	28.1
Q3 2023	5.3	6.5	2.1	3.9	7.6	2.0	0.1	0.8	1.5	3.3	3.2	3.2	34,231	168	215	26.5

Note: Refer to Notes Regarding Scenario Variables for more information on the definitions and sources of historical observations of the variables in the table.

Table A.6. Supervisory severely adverse scenario: International variables, Q3:2020–Q3:2023
Percent, unless otherwise indicated.

Date	Euro area real GDP growth	Euro area inflation	Euro area bilateral dollar exchange rate (USD/euro)	Developing Asia real GDP growth	Developing Asia inflation	Developing Asia bilateral dollar exchange rate (F/USD, index)	Japan real GDP growth	Japan inflation	Japan bilateral dollar exchange rate (yen/USD)	U.K. real GDP growth	U.K. inflation	U.K. bilateral dollar exchange rate (USD/pound)
Q3 2020	35.0	0.2	1.124	1.0	2.4	97.3	20.0	-0.3	107.8	80.0	0.3	1.237
Q4 2020	-3.6	-0.1	1.101	-1.0	0.1	98.9	-6.9	-1.3	107.2	-2.7	0.4	1.212
Q1 2021	-3.0	-0.2	1.074	3.7	-0.7	100.9	-4.5	-1.6	106.7	-3.1	-0.2	1.182
Q2 2021	-2.1	0.4	1.053	8.8	-0.5	102.5	-2.7	-1.6	106.2	-2.3	0.3	1.159
Q3 2021	-1.8	0.2	1.048	7.6	-1.1	102.9	-2.2	-1.7	105.9	-2.1	0.3	1.153
Q4 2021	-1.6	0.2	1.045	6.3	-0.7	103.1	-1.8	-1.5	105.7	-1.9	0.0	1.150
Q1 2022	1.0	-0.1	1.043	4.8	-1.0	103.4	1.0	-1.9	105.6	1.0	0.0	1.148
Q2 2022	5.0	-0.5	1.048	5.2	-0.7	102.9	3.5	-2.1	105.9	5.0	-0.1	1.153
Q3 2022	7.0	-0.8	1.058	5.7	-0.2	102.1	4.5	-2.1	106.2	7.0	-0.1	1.165
Q4 2022	8.0	-0.8	1.080	6.1	0.2	100.5	5.5	-1.8	106.4	8.0	0.1	1.188
Q1 2023	9.0	-0.5	1.090	6.3	0.8	99.7	6.0	-1.3	106.7	9.0	0.5	1.200
Q2 2023	10.0	-0.1	1.101	8.1	1.2	98.9	6.5	-0.7	107.0	10.0	1.0	1.212
Q3 2023	11.0	0.5	1.113	10.2	1.6	98.1	7.5	-0.1	107.2	11.0	1.5	1.225

Note: Refer to Notes Regarding Scenario Variables for more information on the definitions and sources of historical observations of the variables in the table.

Table A.7. Supervisory alternative severe scenario: Domestic variables, Q3:2020–Q3:2023
Percent, unless otherwise indicated.

Date	Real GDP growth	Nominal GDP growth	Real dispo-sable income growth	Nominal dispo-sable income growth	Unem-ployment rate	CPI inflation rate	3-month Treasury rate	5-year Treasury yield	10-year Treasury yield	BBB corporate yield	Mortgage rate	Prime rate	Level			
													Dow Jones Total Stock Market Index	House Price Index	Com-mercial Real Estate Price Index	Market Volatility Index
Q3 2020	24.0	26.6	-12.3	-10.6	9.5	3.7	0.1	0.2	0.3	2.0	2.7	3.3	36,530	220	305	33.6
Q4 2020	-9.1	-8.5	-15.7	-15.0	11.0	1.1	0.1	0.2	0.3	5.0	3.7	3.2	30,566	207	298	70.0
Q1 2021	2.1	3.3	-10.4	-8.9	11.0	1.8	0.1	0.2	0.4	5.5	3.7	3.2	26,681	198	291	64.2
Q2 2021	2.1	3.3	-3.0	-1.6	11.0	1.7	0.1	0.2	0.4	5.9	3.9	3.2	23,647	192	282	62.6
Q3 2021	2.1	2.8	-1.5	0.0	11.0	1.7	0.1	0.3	0.5	6.2	4.0	3.2	20,082	185	268	60.6
Q4 2021	2.1	3.2	-1.0	0.6	11.0	1.7	0.1	0.4	0.7	6.4	4.1	3.2	18,330	177	255	57.6
Q1 2022	3.6	4.2	2.4	4.5	10.8	2.2	0.1	0.5	0.8	6.0	4.0	3.2	19,415	172	241	50.2
Q2 2022	4.2	4.7	1.4	3.4	10.5	2.2	0.1	0.6	1.0	5.8	4.0	3.2	20,703	165	227	45.1
Q3 2022	4.2	4.9	1.7	3.7	10.3	2.2	0.1	0.6	1.1	5.5	4.0	3.2	22,247	161	218	41.0
Q4 2022	4.2	5.2	1.9	3.9	10.0	2.2	0.1	0.7	1.3	5.3	4.0	3.2	24,065	160	213	37.4
Q1 2023	4.8	6.0	2.1	4.2	9.7	2.2	0.1	0.9	1.5	5.0	3.9	3.2	26,221	162	213	34.1
Q2 2023	4.8	6.1	2.0	4.1	9.3	2.2	0.1	1.0	1.6	4.7	3.9	3.2	28,725	164	214	31.0
Q3 2023	5.0	6.3	2.0	4.1	9.0	2.2	0.1	1.2	1.8	4.4	3.8	3.2	31,632	166	215	27.9

Note: Refer to Notes Regarding Scenario Variables for more information on the definitions and sources of historical observations of the variables in the table.

Table A.8. Supervisory alternative severe scenario: International variables, Q3:2020–Q3:2023
Percent, unless otherwise indicated.

Date	Euro area real GDP growth	Euro area inflation	Euro area bilateral dollar exchange rate (USD/euro)	Developing Asia real GDP growth	Developing Asia inflation	Developing Asia bilateral dollar exchange rate (F/USD, index)	Japan real GDP growth	Japan inflation	Japan bilateral dollar exchange rate (yen/USD)	U.K. real GDP growth	U.K. inflation	U.K. bilateral dollar exchange rate (USD/pound)
Q3 2020	35.0	0.3	1.113	1.0	2.5	98.3	20.0	-0.3	107.6	80.0	0.3	1.225
Q4 2020	-4.4	-0.1	1.101	-1.0	0.2	99.3	-6.9	-1.3	107.3	-4.1	0.4	1.212
Q1 2021	1.0	0.0	1.069	5.2	-0.2	102.3	1.0	-1.5	106.7	1.0	-0.1	1.177
Q2 2021	1.0	0.6	1.074	9.7	0.2	101.8	1.0	-1.2	106.8	1.0	0.5	1.182
Q3 2021	1.0	0.5	1.080	7.8	-0.3	101.3	1.0	-1.0	106.9	1.0	0.6	1.188
Q4 2021	1.0	0.7	1.085	5.9	0.3	100.8	1.0	-0.5	107.0	1.0	0.6	1.194
Q1 2022	1.0	0.2	1.090	3.8	-0.4	100.3	1.0	-0.8	107.1	1.0	0.5	1.200
Q2 2022	0.6	-0.4	1.102	4.0	-0.5	100.1	0.6	-1.1	107.1	0.6	0.3	1.215
Q3 2022	0.8	-1.0	1.112	4.2	-0.5	99.9	0.7	-1.4	107.0	0.8	0.0	1.229
Q4 2022	1.0	-1.5	1.121	4.5	-0.5	99.8	0.7	-1.5	107.0	1.0	-0.3	1.241
Q1 2023	2.0	-1.6	1.129	4.7	-0.4	99.6	1.3	-1.5	107.0	2.0	-0.4	1.253
Q2 2023	2.8	-1.6	1.137	6.2	-0.4	99.5	1.5	-1.4	106.9	3.0	-0.4	1.263
Q3 2023	3.0	-1.5	1.143	7.9	-0.4	99.4	1.7	-1.1	106.9	3.5	-0.4	1.272

Note: Refer to Notes Regarding Scenario Variables for more information on the definitions and sources of historical observations of the variables in the table.

Notes Regarding Scenario Variables

Sources for data through 2020:Q2 (as released through September 10, 2020). The 2020:Q2 values of variables marked with an asterisk (*) are projected.

U.S. real GDP growth: Percent change in real gross domestic product, chained 2012 dollars, expressed at an annualized rate, Bureau of Economic Analysis (NIPA table 1.1.6, line 1).

U.S. nominal GDP growth: Percent change in gross domestic product (current dollars), expressed at an annualized rate, Bureau of Economic Analysis (NIPA table 1.1.5, line 1).

U.S. real disposable income growth: Percent change in disposable personal income (current dollars) divided by the price index for personal consumption expenditures, expressed at an annualized rate, Bureau of Economic Analysis (NIPA table 2.1, line 27, and NIPA table 1.1.4, line 2).

U.S. nominal disposable income growth: Percent change in disposable personal income (current dollars), expressed at an annualized rate, Bureau of Economic Analysis (NIPA table 2.1, line 27).

U.S. unemployment rate: Quarterly average of seasonally adjusted monthly data for the unemployment rate of the civilian, non-institutional population of age 16 years and older, Bureau of Labor Statistics (series LNS14000000).

U.S. CPI inflation: Percent change in the quarterly average of seasonally adjusted monthly data for the all-items CPI for all urban consumers (CPI-U), expressed at an annualized rate, Bureau of Labor Statistics (series CUSR0000SA0).

U.S. 3-month Treasury rate: Quarterly average of 3-month Treasury bill secondary market rate on a discount basis, H.15 Release, Selected Interest Rates, Federal Reserve Board (series RIFSGFSM03_N.B).

U.S. 5-year Treasury yield: Quarterly average of the yield on 5-year U.S. Treasury notes, constructed for the FRB/U.S. model by Federal Reserve staff based on the Svensson smoothed term structure model; see Lars E. O. Svensson (1995), "Estimating Forward Interest Rates with the Extended Nelson-Siegel Method," *Quarterly Review*, no. 3, Sveriges Riksbank, pp. 13–26.

U.S. 10-year Treasury yield: Quarterly average of the yield on 10-year U.S. Treasury notes, constructed for the FRB/U.S. model by Federal Reserve staff based on the Svensson smoothed term structure model; see id.

U.S. BBB corporate yield: Quarterly average of ICE BofAML U.S. Corporate 7-10 Year Yield-to-Maturity Index, ICE Data Indices, LLC, used with permission (C4A4 series).

U.S. mortgage rate: Quarterly average of weekly series for the interest rate of a conventional, conforming, 30-year fixed-rate mortgage, obtained from the Primary Mortgage Market Survey of the Federal Home Loan Mortgage Corporation.

U.S. prime rate: Quarterly average of monthly series, H.15 Release (Selected Interest Rates), Federal Reserve Board (series RIFSPBLP_N.M).

U.S. Dow Jones Total Stock Market (Float Cap) Index: End-of-quarter value via Bloomberg Finance L.P.

***U.S. House Price Index**: Price Index for Owner-Occupied Real Estate, Z.1 Release (Financial Accounts of the United States), Federal Reserve Board (series FL075035243.Q divided by 1000).

***U.S. Commercial Real Estate Price Index:** Commercial Real Estate Price Index, Z.1 Release (Financial Accounts of the United States), Federal Reserve Board (series FL075035503.Q divided by 1000).

U.S. Market Volatility Index (VIX): VIX converted to quarterly frequency using the maximum close-of-day value in any quarter, Chicago Board Options Exchange via Bloomberg Finance LP.

Euro area real GDP growth: Percent change in real gross domestic product at an annualized rate, staff calculations based on Statistical Office of the European Communities via Haver, extended back using ECB Area Wide Model dataset (ECB Working Paper series no. 42).

Euro area inflation: Percent change in the quarterly average of the harmonized index of consumer prices at an annualized rate, staff calculations based on Statistical Office of the European Communities via Haver.

Developing Asia real GDP growth: Percent change in real gross domestic product at an annualized rate, staff calculations based on data from Bank of Korea via Haver; National Bureau of Statistics of China via Haver; Indian Central Statistics Office via Haver; Census and Statistics Department of Hong Kong via Haver; and Taiwan Directorate-General of Budget, Accounting and Statistics via Haver.

Developing Asia inflation: Percent change in the quarterly average of the consumer price index, or local equivalent, at an annualized rate, staff calculations based on data from National Bureau of Statistics of China via Haver; Indian Ministry of Statistics and Programme Implementation via Haver; Labour Bureau of India via Haver; Statistics Korea (KOSTAT) via Haver; Census and Statistics Department of Hong Kong via Haver; and Taiwan Directorate-General of Budget, Accounting and Statistics via Haver.

Japan real GDP growth: Percent change in gross domestic product at an annualized rate from 1980 to present and percent change in gross domestic expenditure at an annualized rate prior to 1980, Cabinet Office of Japan via Haver.

Japan inflation: Percent change in the quarterly average of the consumer price index at an annualized rate, based on data from the Ministry of Internal Affairs and Communications via Haver.

U.K. real GDP growth: Percent change in gross domestic product at an annualized rate, U.K. Office for National Statistics via Haver.

U.K. inflation: Percent change in the quarterly average of the consumer price index at an annualized rate from 1988 to present and percent change in the quarterly average of the retail prices index prior to 1988, staff calculations based on data from the U.K. Office for National Statistics via Haver.

Exchange rates: End-of-quarter exchange rates, H.10 Release (Foreign Exchange Rates), Federal Reserve Board.

Appendix B: Firm-Specific Results

Table B.1.A. Ally Financial Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3
Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	10.1	7.4	7.4
Tier 1 capital ratio	11.9	9.1	9.1
Total capital ratio	13.8	11.1	11.1
Tier 1 leverage ratio	8.9	6.9	6.9
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	8.1	6.9
First-lien mortgages, domestic	0.2	1.4
Junior liens and HELOCs, domestic	0.0	3.8
Commercial and industrial[2]	2.4	8.2
Commercial real estate, domestic	0.3	5.7
Credit cards	0.0	0.0
Other consumer[3]	5.0	7.7
Other loans[4]	0.2	14.1

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3
Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	137.0	135.5

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.7	2.0
equals		
Net interest income	8.1	4.4
Noninterest income	6.9	3.8
less		
Noninterest expense[2]	11.3	6.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	7.0	
Credit losses on investment securities (AFS/HTM)[4]	0.3	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-3.6	-2.0
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.1.B. Ally Financial Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	10.1	7.3	7.3
Tier 1 capital ratio	11.9	9.1	9.1
Total capital ratio	13.8	11.1	11.1
Tier 1 leverage ratio	8.9	6.8	6.8
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	7.7	6.6
First-lien mortgages, domestic	0.2	1.3
Junior liens and HELOCs, domestic	0.0	3.7
Commercial and industrial[2]	2.3	8.0
Commercial real estate, domestic	0.3	5.4
Credit cards	0.0	0.0
Other consumer[3]	4.7	7.2
Other loans[4]	0.2	14.4

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	137.0	135.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.7	2.0
equals		
Net interest income	8.1	4.4
Noninterest income	6.9	3.7
less		
Noninterest expense[2]	11.3	6.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	7.3	
Credit losses on investment securities (AFS/HTM)[4]	0.3	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-3.9	-2.1
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.2.A. American Express Company

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	13.6	17.0	13.5
Tier 1 capital ratio	14.8	18.2	14.8
Total capital ratio	16.5	19.8	16.5
Tier 1 leverage ratio	10.4	13.1	10.4
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	15.4	13.8
First-lien mortgages, domestic	0.0	0.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	5.3	14.7
Commercial real estate, domestic	0.0	0.0
Credit cards	9.7	13.3
Other consumer[3]	0.3	16.7
Other loans[4]	0.0	5.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	129.3	132.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	18.8	10.0
equals		
Net interest income	12.6	6.7
Noninterest income	74.5	39.5
less		
Noninterest expense[2]	68.2	36.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	12.6	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	6.2	3.3
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-2.9	-2.9

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.2.B. American Express Company

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	13.6	17.3	13.7
Tier 1 capital ratio	14.8	18.5	15.0
Total capital ratio	16.5	20.2	16.6
Tier 1 leverage ratio	10.4	13.3	10.6
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	14.1	12.6
First-lien mortgages, domestic	0.0	0.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	5.0	13.8
Commercial real estate, domestic	0.0	0.0
Credit cards	8.7	11.9
Other consumer[3]	0.3	15.8
Other loans[4]	0.0	5.7

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	129.3	131.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	18.9	10.0
equals		
Net interest income	12.7	6.7
Noninterest income	74.5	39.5
less		
Noninterest expense[2]	68.2	36.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	12.2	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	6.6	3.5
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-2.9	-2.9

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.3.A. Bank of America Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.6	9.5	9.3
Tier 1 capital ratio	13.2	11.1	10.9
Total capital ratio	15.8	13.5	13.5
Tier 1 leverage ratio	7.4	6.2	6.1
Supplementary leverage ratio	7.1	5.3	5.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	60.2	6.1
First-lien mortgages, domestic	4.7	2.0
Junior liens and HELOCs, domestic	0.9	2.4
Commercial and industrial[2]	16.7	5.8
Commercial real estate, domestic	12.5	16.4
Credit cards	17.6	20.9
Other consumer[3]	1.6	2.1
Other loans[4]	6.2	3.3

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	1,475.1	1,456.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	34.4	1.3
equals		
Net interest income	94.1	3.4
Noninterest income	97.1	3.5
less		
Noninterest expense[2]	156.9	5.7
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	51.8	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	11.3	
Other losses/gains[6]	1.6	
equals		
Net income before taxes	-30.5	-1.1
Memo items		
Other comprehensive income[7]	1.8	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-1.5	0.3

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.3.B. Bank of America Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.6	9.2	9.2
Tier 1 capital ratio	13.2	10.8	10.8
Total capital ratio	15.8	13.4	13.4
Tier 1 leverage ratio	7.4	6.0	6.0
Supplementary leverage ratio	7.1	5.2	5.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	57.9	5.8
First-lien mortgages, domestic	4.4	1.9
Junior liens and HELOCs, domestic	0.9	2.3
Commercial and industrial[2]	17.0	5.9
Commercial real estate, domestic	11.8	15.5
Credit cards	16.0	19.0
Other consumer[3]	1.4	1.9
Other loans[4]	6.3	3.3

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	1,475.1	1,458.5

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	32.7	1.2
equals		
Net interest income	94.6	3.5
Noninterest income	95.5	3.5
less		
Noninterest expense[2]	157.4	5.7
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	53.4	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	11.3	
Other losses/gains[6]	2.6	
equals		
Net income before taxes	-34.7	-1.3
Memo items		
Other comprehensive income[7]	1.2	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-1.5	-0.3

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.4.A. The Bank of New York Mellon Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.7	14.6	11.9
Tier 1 capital ratio	15.6	17.4	14.8
Total capital ratio	16.6	18.4	15.9
Tier 1 leverage ratio	6.2	7.0	5.9
Supplementary leverage ratio	8.2	8.3	7.1

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	1.6	3.0
First-lien mortgages, domestic	0.1	1.3
Junior liens and HELOCs, domestic	0.0	7.5
Commercial and industrial[2]	0.1	2.9
Commercial real estate, domestic	0.4	9.2
Credit cards	0.0	0.0
Other consumer[3]	0.4	12.1
Other loans[4]	0.6	1.7

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	157.3	157.3

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	7.6	1.7
equals		
Net interest income	6.3	1.4
Noninterest income	30.7	7.0
less		
Noninterest expense[2]	29.5	6.7
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	1.6	
Credit losses on investment securities (AFS/HTM)[4]	0.2	
Trading and counterparty losses[5]	1.4	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	4.4	1.0
Memo items		
Other comprehensive income[7]	-0.1	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-1.9	-2.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.4.B. The Bank of New York Mellon Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.7	14.1	12.2
Tier 1 capital ratio	15.6	16.9	15.1
Total capital ratio	16.6	18.0	16.2
Tier 1 leverage ratio	6.2	6.8	6.0
Supplementary leverage ratio	8.2	8.0	7.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	1.6	2.9
First-lien mortgages, domestic	0.1	1.2
Junior liens and HELOCs, domestic	0.0	7.2
Commercial and industrial[2]	0.1	3.0
Commercial real estate, domestic	0.4	8.4
Credit cards	0.0	0.0
Other consumer[3]	0.4	11.4
Other loans[4]	0.6	1.8

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	157.3	157.3

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	7.6	1.7
equals		
Net interest income	6.6	1.5
Noninterest income	30.6	6.9
less		
Noninterest expense[2]	29.5	6.7
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	1.7	
Credit losses on investment securities (AFS/HTM)[4]	0.2	
Trading and counterparty losses[5]	1.4	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	4.3	1.0
Memo items		
Other comprehensive income[7]	-0.8	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-1.9	-2.7

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.5.A. Barclays US LLC

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	17.3	15.5	14.7
Tier 1 capital ratio	20.4	18.7	18.0
Total capital ratio	23.4	21.9	21.3
Tier 1 leverage ratio	9.5	8.7	8.2
Supplementary leverage ratio	9.1	7.6	7.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	5.0	13.8
First-lien mortgages, domestic	0.0	0.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	0.0	22.8
Commercial real estate, domestic	0.0	12.6
Credit cards	4.8	22.4
Other consumer[3]	0.1	16.7
Other loans[4]	0.1	0.7

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	83.3	82.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	4.7	3.2
equals		
Net interest income	5.9	4.0
Noninterest income	13.7	9.2
less		
Noninterest expense[2]	14.9	10.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	4.3	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	1.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-0.6	-0.4
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.5.B. Barclays US LLC

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	17.3	15.7	15.2
Tier 1 capital ratio	20.4	18.9	18.4
Total capital ratio	23.4	22.2	21.7
Tier 1 leverage ratio	9.5	8.7	8.5
Supplementary leverage ratio	9.1	7.7	7.5

[1] The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	4.6	12.6
First-lien mortgages, domestic	0.0	0.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	0.0	21.5
Commercial real estate, domestic	0.0	11.7
Credit cards	4.4	20.4
Other consumer[3]	0.0	15.8
Other loans[4]	0.1	0.7

[1] Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

[2] Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

[3] Other consumer loans include student loans and automobile loans.

[4] Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	83.3	82.0

[1] For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	4.6	3.1
equals		
Net interest income	5.9	4.0
Noninterest income	13.6	9.2
less		
Noninterest expense[2]	14.9	10.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	4.1	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	1.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-0.5	-0.3
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

[1] Average assets is the nine-quarter average of total assets.

[2] Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

[3] Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

[4] For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

[5] Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

[6] Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

[7] Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.6.A. BMO Financial Corp.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.1	7.0	7.0
Tier 1 capital ratio	12.6	7.5	7.5
Total capital ratio	15.1	10.0	10.0
Tier 1 leverage ratio	8.5	5.0	5.0
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	6.5	7.6
First-lien mortgages, domestic	0.2	1.9
Junior liens and HELOCs, domestic	0.1	3.7
Commercial and industrial[2]	3.0	8.0
Commercial real estate, domestic	1.7	15.1
Credit cards	0.1	21.2
Other consumer[3]	0.3	4.8
Other loans[4]	1.2	6.0

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	125.3	124.5

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	0.8	0.4
equals		
Net interest income	7.9	4.2
Noninterest income	3.3	1.8
less		
Noninterest expense[2]	10.4	5.6
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	6.6	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-5.8	-3.1
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.6.B. BMO Financial Corp.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.1	6.5	6.5
Tier 1 capital ratio	12.6	7.0	7.0
Total capital ratio	15.1	9.8	9.8
Tier 1 leverage ratio	8.5	4.7	4.7
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	6.4	7.5
First-lien mortgages, domestic	0.1	1.8
Junior liens and HELOCs, domestic	0.1	3.5
Commercial and industrial[2]	3.0	8.0
Commercial real estate, domestic	1.6	14.3
Credit cards	0.1	19.4
Other consumer[3]	0.3	4.5
Other loans[4]	1.2	6.2

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	125.3	124.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	0.7	0.4
equals		
Net interest income	8.0	4.3
Noninterest income	3.2	1.7
less		
Noninterest expense[2]	10.4	5.6
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	7.2	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-6.5	-3.5
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.7.A. BNP Paribas USA, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	15.8	11.2	11.2
Tier 1 capital ratio	15.8	11.2	11.2
Total capital ratio	18.2	13.5	13.5
Tier 1 leverage ratio	8.6	6.1	6.1
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	5.0	7.6
First-lien mortgages, domestic	0.2	2.3
Junior liens and HELOCs, domestic	0.1	3.4
Commercial and industrial[2]	1.5	10.3
Commercial real estate, domestic	1.7	11.1
Credit cards	0.1	23.7
Other consumer[3]	1.1	7.6
Other loans[4]	0.4	3.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	89.7	88.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	0.8	0.6
equals		
Net interest income	5.4	3.8
Noninterest income	4.0	2.8
less		
Noninterest expense[2]	8.6	6.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	5.0	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-4.2	-2.9
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.7.B. BNP Paribas USA, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	15.8	10.8	10.8
Tier 1 capital ratio	15.8	10.8	10.8
Total capital ratio	18.2	13.5	13.5
Tier 1 leverage ratio	8.6	5.8	5.8
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	4.8	7.3
First-lien mortgages, domestic	0.2	2.2
Junior liens and HELOCs, domestic	0.1	3.2
Commercial and industrial[2]	1.5	10.2
Commercial real estate, domestic	1.6	10.6
Credit cards	0.1	21.7
Other consumer[3]	1.0	6.8
Other loans[4]	0.4	3.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	89.7	88.7

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	0.8	0.6
equals		
Net interest income	5.5	3.9
Noninterest income	3.9	2.7
less		
Noninterest expense[2]	8.6	6.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	5.3	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-4.6	-3.2
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.8.A. Capital One Financial Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3
Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.4	7.2	7.1
Tier 1 capital ratio	14.2	8.9	8.9
Total capital ratio	16.7	11.5	11.4
Tier 1 leverage ratio	10.3	6.6	6.6
Supplementary leverage ratio	9.7	5.5	5.5

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	42.6	17.0
First-lien mortgages, domestic	0.0	2.5
Junior liens and HELOCs, domestic	0.0	6.9
Commercial and industrial[2]	4.7	13.0
Commercial real estate, domestic	2.1	6.6
Credit cards	27.5	27.7
Other consumer[3]	7.2	11.4
Other loans[4]	1.1	5.4

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.
2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.
3 Other consumer loans include student loans and automobile loans.
4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3
Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	290.2	294.7

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	23.1	5.5
equals		
Net interest income	48.5	11.5
Noninterest income	12.7	3.0
less		
Noninterest expense[2]	38.0	9.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	35.8	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-12.8	-3.0
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.1	-0.1

1 Average assets is the nine-quarter average of total assets.
2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.
3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.
4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.
5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.
6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.
7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.8.B. Capital One Financial Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.4	7.4	7.4
Tier 1 capital ratio	14.2	9.2	9.2
Total capital ratio	16.7	11.8	11.8
Tier 1 leverage ratio	10.3	6.8	6.8
Supplementary leverage ratio	9.7	5.7	5.7

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	39.7	15.9
First-lien mortgages, domestic	0.0	2.4
Junior liens and HELOCs, domestic	0.0	6.6
Commercial and industrial[2]	4.6	12.9
Commercial real estate, domestic	1.9	6.0
Credit cards	25.2	25.4
Other consumer[3]	6.8	10.8
Other loans[4]	1.1	5.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	290.2	293.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	23.1	5.5
equals		
Net interest income	48.6	11.5
Noninterest income	12.6	3.0
less		
Noninterest expense[2]	38.1	9.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	34.9	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.2	
equals		
Net income before taxes	-12.0	-2.8
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.1	-0.1

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.9.A. Citigroup Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.8	10.9	9.6
Tier 1 capital ratio	13.3	12.5	11.1
Total capital ratio	16.5	15.5	14.5
Tier 1 leverage ratio	7.1	6.6	5.8
Supplementary leverage ratio	6.7	5.3	4.7

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	55.9	8.2
First-lien mortgages, domestic	1.9	2.3
Junior liens and HELOCs, domestic	0.8	7.4
Commercial and industrial[2]	10.3	5.7
Commercial real estate, domestic	2.8	11.7
Credit cards	30.6	21.4
Other consumer[3]	2.4	8.2
Other loans[4]	7.2	3.3

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	1,187.3	1,178.6

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	49.4	2.2
equals		
Net interest income	104.8	4.7
Noninterest income	63.9	2.9
less		
Noninterest expense[2]	119.3	5.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	40.0	
Credit losses on investment securities (AFS/HTM)[4]	0.5	
Trading and counterparty losses[5]	10.3	
Other losses/gains[6]	1.2	
equals		
Net income before taxes	-2.7	-0.1
Memo items		
Other comprehensive income[7]	1.1	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-35.4	-34.4

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.9.B. Citigroup Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.8	10.6	9.8
Tier 1 capital ratio	13.3	12.2	11.4
Total capital ratio	16.5	15.5	14.8
Tier 1 leverage ratio	7.1	6.5	6.0
Supplementary leverage ratio	6.7	5.2	4.8

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	52.7	7.7
First-lien mortgages, domestic	1.7	2.1
Junior liens and HELOCs, domestic	0.7	7.0
Commercial and industrial[2]	10.5	5.7
Commercial real estate, domestic	2.6	10.8
Credit cards	28.0	19.6
Other consumer[3]	2.1	7.2
Other loans[4]	7.2	3.3

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	1,187.3	1,178.4

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	48.2	2.2
equals		
Net interest income	105.7	4.7
Noninterest income	62.2	2.8
less		
Noninterest expense[2]	119.7	5.4
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	40.2	
Credit losses on investment securities (AFS/HTM)[4]	0.5	
Trading and counterparty losses[5]	10.3	
Other losses/gains[6]	1.8	
equals		
Net income before taxes	-4.6	-0.2
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-35.4	-35.5

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.10.A. Citizens Financial Group, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.6	6.3	6.3
Tier 1 capital ratio	10.9	7.7	7.7
Total capital ratio	13.1	9.9	9.9
Tier 1 leverage ratio	9.3	6.5	6.5
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	8.6	7.0
First-lien mortgages, domestic	0.5	2.3
Junior liens and HELOCs, domestic	0.5	4.2
Commercial and industrial[2]	2.4	6.3
Commercial real estate, domestic	2.7	15.5
Credit cards	0.4	25.1
Other consumer[3]	1.7	6.4
Other loans[4]	0.4	6.2

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	147.3	146.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.7	2.0
equals		
Net interest income	9.7	5.4
Noninterest income	4.1	2.3
less		
Noninterest expense[2]	10.1	5.6
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	8.2	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-4.6	-2.5
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.10.B. Citizens Financial Group, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.6	6.2	6.2
Tier 1 capital ratio	10.9	7.5	7.5
Total capital ratio	13.1	9.7	9.7
Tier 1 leverage ratio	9.3	6.3	6.3
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	8.3	6.8
First-lien mortgages, domestic	0.4	2.2
Junior liens and HELOCs, domestic	0.5	4.1
Commercial and industrial[2]	2.4	6.3
Commercial real estate, domestic	2.5	14.5
Credit cards	0.4	22.6
Other consumer[3]	1.6	6.1
Other loans[4]	0.4	6.3

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	147.3	145.4

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.7	2.0
equals		
Net interest income	9.7	5.4
Noninterest income	4.1	2.3
less		
Noninterest expense[2]	10.1	5.6
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	8.6	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-5.0	-2.8
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.11.A. Credit Suisse Holdings (USA), Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	21.4	17.8	16.9
Tier 1 capital ratio	22.0	18.5	17.6
Total capital ratio	22.1	18.5	17.8
Tier 1 leverage ratio	14.0	11.2	10.6
Supplementary leverage ratio	12.6	10.1	9.5

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	0.2	1.7
First-lien mortgages, domestic	0.0	0.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	0.0	0.0
Commercial real estate, domestic	0.1	52.2
Credit cards	0.0	0.0
Other consumer[3]	0.0	16.7
Other loans[4]	0.1	0.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	79.0	74.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

The risk-weighted assets are sourced from the FR Y-14A reports filed by firms in November. In mid-December, Credit Suisse revised its risk-weighted assets reported in the FR Y-9C as of June 30, 2020 to $79.3 billion. The revised risk-weighted assets reported in mid-December would result in risk-based capital ratios that are approximately 5 to 7 basis points lower.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	1.1	0.9
equals		
Net interest income	-0.9	-0.8
Noninterest income	13.4	11.0
less		
Noninterest expense[2]	11.3	9.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	0.2	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	2.6	
Other losses/gains[6]	0.2	
equals		
Net income before taxes	-1.8	-1.5
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.11.B. Credit Suisse Holdings (USA), Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	21.4	17.7	17.1
Tier 1 capital ratio	22.0	18.3	17.7
Total capital ratio	22.1	18.4	17.8
Tier 1 leverage ratio	14.0	11.1	10.7
Supplementary leverage ratio	12.6	10.0	9.6

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	0.2	1.6
First-lien mortgages, domestic	0.0	0.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	0.0	0.0
Commercial real estate, domestic	0.1	45.2
Credit cards	0.0	0.0
Other consumer[3]	0.0	15.8
Other loans[4]	0.1	0.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	79.0	74.1

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

The risk-weighted assets are sourced from the FR Y-14A reports filed by firms in November. In mid-December, Credit Suisse revised its risk-weighted assets reported in the FR Y-9C as of June 30, 2020 to $79.3 billion. The revised risk-weighted assets reported in mid-December would result in risk-based capital ratios that are approximately 5 to 7 basis points lower.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	1.0	0.8
equals		
Net interest income	-0.9	-0.8
Noninterest income	13.3	10.9
less		
Noninterest expense[2]	11.3	9.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	0.1	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	2.6	
Other losses/gains[6]	0.2	
equals		
Net income before taxes	-1.9	-1.6
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.12.A. DB USA Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1 2]	
		Ending	Minimum
Common equity tier 1 capital ratio	31.5	19.8	19.8
Tier 1 capital ratio	44.7	34.3	34.3
Total capital ratio	44.8	34.6	34.6
Tier 1 leverage ratio	10.4	7.3	7.3
Supplementary leverage ratio	12.0	6.6	6.6

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

2 DWS USA Corporation, the second U.S. intermediate holding company subsidiary of Deutsche Bank AG, was subject to December 2020 Stress Test and maintained capital above each minimum regulatory capital ratio on a post-stress basis. DWS USA Corporation had about $2 billion in assets as of the end of second quarter of 2020.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	0.9	7.0
First-lien mortgages, domestic	0.1	2.5
Junior liens and HELOCs, domestic	0.0	6.0
Commercial and industrial[2]	0.0	1.2
Commercial real estate, domestic	0.7	16.5
Credit cards	0.0	0.0
Other consumer[3]	0.0	8.0
Other loans[4]	0.1	2.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	32.0	29.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	-0.7	-0.6
equals		
Net interest income	0.8	0.7
Noninterest income	10.0	8.7
less		
Noninterest expense[2]	11.5	10.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	0.9	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.9	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-2.5	-2.2
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.2	-0.2

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.12.B. DB USA Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1 2]	
		Ending	Minimum
Common equity tier 1 capital ratio	31.5	19.5	19.5
Tier 1 capital ratio	44.7	34.0	34.0
Total capital ratio	44.8	34.5	34.5
Tier 1 leverage ratio	10.4	7.3	7.3
Supplementary leverage ratio	12.0	6.6	6.6

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

2 DWS USA Corporation, the second U.S. intermediate holding company subsidiary of Deutsche Bank AG, was subject to December 2020 Stress Test and maintained capital above each minimum regulatory capital ratio on a post-stress basis. DWS USA Corporation had about $2 billion in assets as of the end of second quarter of 2020.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	0.8	6.8
First-lien mortgages, domestic	0.1	2.4
Junior liens and HELOCs, domestic	0.0	5.9
Commercial and industrial[2]	0.0	1.2
Commercial real estate, domestic	0.6	15.9
Credit cards	0.0	0.0
Other consumer[3]	0.0	7.5
Other loans[4]	0.1	2.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	32.0	29.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	-0.7	-0.6
equals		
Net interest income	0.8	0.7
Noninterest income	9.9	8.6
less		
Noninterest expense[2]	11.5	10.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	0.9	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.9	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-2.6	-2.3
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.2	-0.2

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.13.A. Discover Financial Services

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.7	9.0	8.3
Tier 1 capital ratio	12.9	10.2	9.4
Total capital ratio	14.7	12.0	11.4
Tier 1 leverage ratio	10.0	8.1	7.3
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	18.9	21.3
First-lien mortgages, domestic	0.0	2.5
Junior liens and HELOCs, domestic	0.1	9.9
Commercial and industrial[2]	0.0	27.0
Commercial real estate, domestic	0.0	22.3
Credit cards	17.1	24.4
Other consumer[3]	1.6	9.6
Other loans[4]	0.0	5.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	90.7	90.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	13.6	12.0
equals		
Net interest income	20.1	17.7
Noninterest income	3.8	3.3
less		
Noninterest expense[2]	10.3	9.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	15.1	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-1.5	-1.3
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.13.B. Discover Financial Services

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.7	10.1	9.6
Tier 1 capital ratio	12.9	11.2	10.8
Total capital ratio	14.7	13.1	12.7
Tier 1 leverage ratio	10.0	8.9	8.5
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	90.7	89.7

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	17.4	19.5
First-lien mortgages, domestic	0.0	2.4
Junior liens and HELOCs, domestic	0.1	9.5
Commercial and industrial[2]	0.0	25.7
Commercial real estate, domestic	0.0	20.2
Credit cards	15.6	22.3
Other consumer[3]	1.6	9.1
Other loans[4]	0.0	5.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	13.6	12.0
equals		
Net interest income	20.2	17.7
Noninterest income	3.8	3.3
less		
Noninterest expense[2]	10.3	9.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	14.3	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-0.7	-0.6
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.14.A. Fifth Third Bancorp

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.7	7.6	7.5
Tier 1 capital ratio	11.0	8.9	8.8
Total capital ratio	14.2	12.1	12.1
Tier 1 leverage ratio	8.2	6.6	6.5
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	9.3	8.4
First-lien mortgages, domestic	0.4	2.7
Junior liens and HELOCs, domestic	0.2	3.8
Commercial and industrial[2]	3.5	7.7
Commercial real estate, domestic	3.3	20.9
Credit cards	0.6	29.3
Other consumer[3]	0.8	5.1
Other loans[4]	0.4	4.3

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	143.3	142.7

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	5.7	2.8
equals		
Net interest income	10.0	4.9
Noninterest income	8.5	4.2
less		
Noninterest expense[2]	12.8	6.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	8.2	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-2.6	-1.3
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.14.B. Fifth Third Bancorp

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.7	7.5	7.5
Tier 1 capital ratio	11.0	8.7	8.7
Total capital ratio	14.2	12.0	12.0
Tier 1 leverage ratio	8.2	6.5	6.5
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	9.0	8.2
First-lien mortgages, domestic	0.4	2.5
Junior liens and HELOCs, domestic	0.2	3.7
Commercial and industrial[2]	3.5	7.8
Commercial real estate, domestic	3.1	19.7
Credit cards	0.6	26.3
Other consumer[3]	0.7	4.7
Other loans[4]	0.4	4.4

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	143.3	142.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	5.7	2.8
equals		
Net interest income	10.1	5.0
Noninterest income	8.4	4.2
less		
Noninterest expense[2]	12.8	6.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	8.7	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-3.0	-1.5
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.15.A. The Goldman Sachs Group, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	13.3	9.8	8.5
Tier 1 capital ratio	15.2	11.8	10.5
Total capital ratio	18.1	14.6	13.6
Tier 1 leverage ratio	7.6	5.8	5.1
Supplementary leverage ratio	6.6	4.4	3.8

[1] The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	13.5	10.1
First-lien mortgages, domestic	0.0	2.5
Junior liens and HELOCs, domestic	0.0	4.0
Commercial and industrial[2]	4.7	12.6
Commercial real estate, domestic	3.3	44.8
Credit cards	0.6	23.7
Other consumer[3]	0.9	11.1
Other loans[4]	4.1	5.3

[1] Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

[2] Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

[3] Other consumer loans include student loans and automobile loans.

[4] Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	563.1	553.3

[1] For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	17.4	1.5
equals		
Net interest income	10.0	0.9
Noninterest income	77.6	6.8
less		
Noninterest expense[2]	70.2	6.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	11.8	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	20.6	
Other losses/gains[6]	3.8	
equals		
Net income before taxes	-18.8	-1.6
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.3	-0.4

[1] Average assets is the nine-quarter average of total assets.

[2] Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

[3] Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

[4] For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

[5] Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

[6] Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

[7] Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.15.B. The Goldman Sachs Group, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	13.3	9.2	8.3
Tier 1 capital ratio	15.2	11.2	10.3
Total capital ratio	18.1	14.1	13.5
Tier 1 leverage ratio	7.6	5.5	5.1
Supplementary leverage ratio	6.6	4.1	3.8

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	13.4	10.0
First-lien mortgages, domestic	0.0	2.4
Junior liens and HELOCs, domestic	0.0	3.8
Commercial and industrial[2]	4.8	12.8
Commercial real estate, domestic	3.1	42.6
Credit cards	0.5	21.7
Other consumer[3]	0.8	10.5
Other loans[4]	4.2	5.3

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	563.1	553.7

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	16.0	1.4
equals		
Net interest income	10.0	0.9
Noninterest income	76.4	6.7
less		
Noninterest expense[2]	70.4	6.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	12.7	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	20.6	
Other losses/gains[6]	4.9	
equals		
Net income before taxes	-22.2	-1.9
Memo items		
Other comprehensive income[7]	-0.2	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.3	-0.5

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.16.A. HSBC North America Holdings Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	13.6	5.5	5.5
Tier 1 capital ratio	15.4	7.3	7.3
Total capital ratio	19.9	11.8	11.8
Tier 1 leverage ratio	6.9	3.2	3.2
Supplementary leverage ratio	6.4	2.5	2.5

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	7.4	10.6
First-lien mortgages, domestic	0.5	3.0
Junior liens and HELOCs, domestic	0.1	8.1
Commercial and industrial[2]	2.0	6.7
Commercial real estate, domestic	3.7	33.1
Credit cards	0.4	35.8
Other consumer[3]	0.0	11.2
Other loans[4]	0.6	7.3

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	127.2	121.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	-0.4	-0.1
equals		
Net interest income	5.3	1.9
Noninterest income	5.7	2.0
less		
Noninterest expense[2]	11.3	4.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	7.2	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	1.2	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-8.8	-3.1
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.1	0.1

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.16.B. HSBC North America Holdings Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	13.6	5.1	5.1
Tier 1 capital ratio	15.4	7.0	7.0
Total capital ratio	19.9	11.8	11.8
Tier 1 leverage ratio	6.9	3.0	3.0
Supplementary leverage ratio	6.4	2.4	2.4

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	7.2	10.4
First-lien mortgages, domestic	0.5	2.9
Junior liens and HELOCs, domestic	0.1	7.9
Commercial and industrial[2]	2.0	6.8
Commercial real estate, domestic	3.6	31.9
Credit cards	0.4	33.0
Other consumer[3]	0.0	10.7
Other loans[4]	0.6	7.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	127.2	121.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	-0.4	-0.1
equals		
Net interest income	5.3	1.9
Noninterest income	5.6	2.0
less		
Noninterest expense[2]	11.3	4.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	7.6	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	1.2	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-9.2	-3.3
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.1	0.1

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.17.A. Huntington Bancshares Incorporated

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.8	8.2	8.0
Tier 1 capital ratio	11.8	10.1	10.0
Total capital ratio	13.8	11.9	11.9
Tier 1 leverage ratio	8.9	7.6	7.5
Supplementary leverage ratio	n/a	n/a	n/a

[1] The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	5.0	6.8
First-lien mortgages, domestic	0.5	3.8
Junior liens and HELOCs, domestic	0.2	3.1
Commercial and industrial[2]	1.5	7.2
Commercial real estate, domestic	1.6	16.4
Credit cards	0.1	23.7
Other consumer[3]	0.8	4.8
Other loans[4]	0.2	3.8

[1] Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

[2] Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

[3] Other consumer loans include student loans and automobile loans.

[4] Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	87.3	87.1

[1] For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.1	2.6
equals		
Net interest income	6.8	5.8
Noninterest income	3.4	2.8
less		
Noninterest expense[2]	7.1	6.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	4.1	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-1.1	-0.9
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

[1] Average assets is the nine-quarter average of total assets.

[2] Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

[3] Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

[4] For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

[5] Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

[6] Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

[7] Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.17.B. Huntington Bancshares Incorporated

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.8	8.1	8.1
Tier 1 capital ratio	11.8	10.0	10.0
Total capital ratio	13.8	12.1	12.1
Tier 1 leverage ratio	8.9	7.5	7.5
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	4.8	6.5
First-lien mortgages, domestic	0.5	3.6
Junior liens and HELOCs, domestic	0.2	3.0
Commercial and industrial[2]	1.5	7.3
Commercial real estate, domestic	1.6	15.6
Credit cards	0.1	21.7
Other consumer[3]	0.8	4.4
Other loans[4]	0.2	3.9

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	87.3	87.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.2	2.7
equals		
Net interest income	6.9	5.8
Noninterest income	3.4	2.8
less		
Noninterest expense[2]	7.1	6.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	4.3	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-1.2	-1.1
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.18.A. JPMorgan Chase & Co.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.4	10.8	10.0
Tier 1 capital ratio	14.3	12.7	11.9
Total capital ratio	16.7	14.8	14.4
Tier 1 leverage ratio	6.9	6.1	5.7
Supplementary leverage ratio	6.8	5.0	4.7

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	70.1	7.3
First-lien mortgages, domestic	4.3	2.1
Junior liens and HELOCs, domestic	0.6	2.2
Commercial and industrial[2]	18.6	10.3
Commercial real estate, domestic	5.0	4.2
Credit cards	28.3	22.3
Other consumer[3]	2.3	3.8
Other loans[4]	11.0	4.7

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	1,541.4	1,527.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	59.9	1.9
equals		
Net interest income	116.2	3.6
Noninterest income	138.6	4.3
less		
Noninterest expense[2]	194.9	6.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	52.1	
Credit losses on investment securities (AFS/HTM)[4]	0.8	
Trading and counterparty losses[5]	23.2	
Other losses/gains[6]	2.5	
equals		
Net income before taxes	-18.8	-0.6
Memo items		
Other comprehensive income[7]	-0.2	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	6.0	5.9

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.18.B. JPMorgan Chase & Co.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3
Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.4	10.3	10.0
Tier 1 capital ratio	14.3	12.3	11.9
Total capital ratio	16.7	14.7	14.4
Tier 1 leverage ratio	6.9	5.9	5.7
Supplementary leverage ratio	6.8	4.8	4.7

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	67.1	7.0
First-lien mortgages, domestic	4.1	1.9
Junior liens and HELOCs, domestic	0.6	2.0
Commercial and industrial[2]	18.7	10.3
Commercial real estate, domestic	4.7	3.9
Credit cards	25.7	20.2
Other consumer[3]	2.2	3.6
Other loans[4]	11.2	4.8

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.
2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.
3 Other consumer loans include student loans and automobile loans.
4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3
Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	1,541.4	1,527.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	57.7	1.8
equals		
Net interest income	117.1	3.6
Noninterest income	136.1	4.2
less		
Noninterest expense[2]	195.6	6.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	53.5	
Credit losses on investment securities (AFS/HTM)[4]	0.7	
Trading and counterparty losses[5]	23.2	
Other losses/gains[6]	3.9	
equals		
Net income before taxes	-23.6	-0.7
Memo items		
Other comprehensive income[7]	-3.1	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	6.0	2.9

1 Average assets is the nine-quarter average of total assets.
2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.
3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.
4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.
5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.
6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.
7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.19.A. KeyCorp

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.1	8.0	7.7
Tier 1 capital ratio	10.5	9.4	9.1
Total capital ratio	12.8	11.3	11.3
Tier 1 leverage ratio	8.8	7.9	7.7
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	5.8	5.9
First-lien mortgages, domestic	0.3	2.9
Junior liens and HELOCs, domestic	0.3	3.9
Commercial and industrial[2]	2.2	5.9
Commercial real estate, domestic	1.8	11.6
Credit cards	0.2	23.7
Other consumer[3]	0.5	5.0
Other loans[4]	0.5	2.9

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	136.3	135.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	4.0	2.3
equals		
Net interest income	8.8	5.1
Noninterest income	6.1	3.6
less		
Noninterest expense[2]	10.9	6.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	5.0	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-1.0	-0.6
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.19.B. KeyCorp

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.1	7.7	7.7
Tier 1 capital ratio	10.5	9.1	9.0
Total capital ratio	12.8	11.3	11.3
Tier 1 leverage ratio	8.8	7.6	7.6
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	5.7	5.7
First-lien mortgages, domestic	0.3	2.7
Junior liens and HELOCs, domestic	0.2	3.8
Commercial and industrial[2]	2.3	6.0
Commercial real estate, domestic	1.6	10.8
Credit cards	0.2	21.7
Other consumer[3]	0.5	4.7
Other loans[4]	0.5	3.0

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	136.3	135.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	4.0	2.3
equals		
Net interest income	8.8	5.1
Noninterest income	6.1	3.5
less		
Noninterest expense[2]	10.9	6.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	5.2	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.3	
equals		
Net income before taxes	-1.5	-0.9
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.20.A. M&T Bank Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.5	5.0	5.0
Tier 1 capital ratio	10.7	6.2	6.2
Total capital ratio	13.0	8.5	8.5
Tier 1 leverage ratio	8.6	4.9	4.9
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	105.6	104.7

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	4.3	3.1
equals		
Net interest income	8.0	5.7
Noninterest income	4.6	3.3
less		
Noninterest expense[2]	8.3	5.9
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	8.9	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-4.6	-3.3
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	9.2	10.1
First-lien mortgages, domestic	0.5	3.4
Junior liens and HELOCs, domestic	0.2	3.6
Commercial and industrial[2]	1.3	7.3
Commercial real estate, domestic	6.0	16.3
Credit cards	0.1	23.7
Other consumer[3]	0.8	7.4
Other loans[4]	0.3	5.0

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Table B.20.B. M&T Bank Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.5	4.8	4.8
Tier 1 capital ratio	10.7	6.0	6.0
Total capital ratio	13.0	8.4	8.4
Tier 1 leverage ratio	8.6	4.8	4.8
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	8.8	9.7
First-lien mortgages, domestic	0.5	3.3
Junior liens and HELOCs, domestic	0.1	3.5
Commercial and industrial[2]	1.3	7.3
Commercial real estate, domestic	5.7	15.5
Credit cards	0.1	21.7
Other consumer[3]	0.7	6.7
Other loans[4]	0.3	5.1

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	105.6	104.5

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	4.3	3.1
equals		
Net interest income	8.1	5.8
Noninterest income	4.6	3.3
less		
Noninterest expense[2]	8.3	6.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	9.1	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-4.9	-3.5
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.21.A. Morgan Stanley

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3
Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	16.5	13.1	12.4
Tier 1 capital ratio	18.6	15.2	14.5
Total capital ratio	21.0	17.7	17.1
Tier 1 leverage ratio	8.1	6.5	6.2
Supplementary leverage ratio	7.3	5.1	4.9

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	7.2	4.4
First-lien mortgages, domestic	0.5	1.7
Junior liens and HELOCs, domestic	0.0	4.0
Commercial and industrial[2]	1.2	8.4
Commercial real estate, domestic	2.3	18.3
Credit cards	0.0	0.0
Other consumer[3]	0.2	0.9
Other loans[4]	3.0	3.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.
2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.
3 Other consumer loans include student loans and automobile loans.
4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3
Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	415.5	407.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	6.1	0.6
equals		
Net interest income	10.4	1.1
Noninterest income	76.9	7.9
less		
Noninterest expense[2]	81.2	8.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	7.6	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	10.1	
Other losses/gains[6]	3.3	
equals		
Net income before taxes	-14.9	-1.5
Memo items		
Other comprehensive income[7]	0.7	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.7

1 Average assets is the nine-quarter average of total assets.
2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.
3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.
4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.
5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.
6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.
7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.21.B. Morgan Stanley

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	16.5	12.3	11.9
Tier 1 capital ratio	18.6	14.4	14.1
Total capital ratio	21.0	17.0	16.8
Tier 1 leverage ratio	8.1	6.2	6.0
Supplementary leverage ratio	7.3	4.9	4.7

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	7.1	4.4
First-lien mortgages, domestic	0.5	1.6
Junior liens and HELOCs, domestic	0.0	3.8
Commercial and industrial[2]	1.2	8.6
Commercial real estate, domestic	2.1	16.8
Credit cards	0.0	0.0
Other consumer[3]	0.2	0.9
Other loans[4]	3.0	3.7

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	415.5	408.1

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	5.1	0.5
equals		
Net interest income	10.5	1.1
Noninterest income	76.0	7.8
less		
Noninterest expense[2]	81.3	8.3
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	8.0	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	10.1	
Other losses/gains[6]	4.8	
equals		
Net income before taxes	-17.8	-1.8
Memo items		
Other comprehensive income[7]	0.4	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.4

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.22.A. MUFG Americas Holdings Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	14.5	10.9	10.9
Tier 1 capital ratio	14.5	10.9	10.9
Total capital ratio	15.6	12.0	12.0
Tier 1 leverage ratio	8.9	6.7	6.7
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	5.4	6.4
First-lien mortgages, domestic	0.9	2.9
Junior liens and HELOCs, domestic	0.1	3.6
Commercial and industrial[2]	1.7	10.2
Commercial real estate, domestic	1.5	8.1
Credit cards	0.1	23.7
Other consumer[3]	0.6	17.0
Other loans[4]	0.5	4.4

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	103.8	102.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	1.4	0.8
equals		
Net interest income	7.0	4.2
Noninterest income	5.2	3.1
less		
Noninterest expense[2]	10.8	6.5
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	5.1	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-3.8	-2.2
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.22.B. MUFG Americas Holdings Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	14.5	10.7	10.7
Tier 1 capital ratio	14.5	10.7	10.7
Total capital ratio	15.6	12.0	12.0
Tier 1 leverage ratio	8.9	6.5	6.5
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	5.2	6.2
First-lien mortgages, domestic	0.9	2.7
Junior liens and HELOCs, domestic	0.1	3.3
Commercial and industrial[2]	1.7	10.4
Commercial real estate, domestic	1.4	7.4
Credit cards	0.1	21.7
Other consumer[3]	0.6	16.1
Other loans[4]	0.5	4.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	103.8	102.7

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	1.3	0.8
equals		
Net interest income	7.1	4.2
Noninterest income	5.1	3.0
less		
Noninterest expense[2]	10.8	6.5
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	5.3	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-4.1	-2.4
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.23.A. Northern Trust Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	13.4	13.2	12.6
Tier 1 capital ratio	14.6	14.3	13.8
Total capital ratio	16.5	16.5	16.3
Tier 1 leverage ratio	7.6	7.5	7.2
Supplementary leverage ratio	9.0	8.6	8.3

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	2.0	5.9
First-lien mortgages, domestic	0.1	1.2
Junior liens and HELOCs, domestic	0.0	7.9
Commercial and industrial[2]	0.3	6.3
Commercial real estate, domestic	0.4	8.7
Credit cards	0.0	0.0
Other consumer[3]	0.0	16.7
Other loans[4]	1.2	6.4

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	72.4	72.4

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	2.0	1.3
equals		
Net interest income	2.5	1.7
Noninterest income	10.2	6.7
less		
Noninterest expense[2]	10.7	7.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	2.2	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-0.3	-0.2
Memo items		
Other comprehensive income[7]	0.2	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.4	0.6

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.23.B. Northern Trust Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3
Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	13.4	12.8	12.6
Tier 1 capital ratio	14.6	13.9	13.8
Total capital ratio	16.5	16.3	16.3
Tier 1 leverage ratio	7.6	7.3	7.3
Supplementary leverage ratio	9.0	8.3	8.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	2.0	5.9
First-lien mortgages, domestic	0.1	1.0
Junior liens and HELOCs, domestic	0.0	7.6
Commercial and industrial[2]	0.3	6.4
Commercial real estate, domestic	0.3	7.9
Credit cards	0.0	0.0
Other consumer[3]	0.0	15.8
Other loans[4]	1.2	6.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.
2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.
3 Other consumer loans include student loans and automobile loans.
4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3
Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	72.4	72.6

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	2.1	1.4
equals		
Net interest income	2.7	1.8
Noninterest income	10.2	6.7
less		
Noninterest expense[2]	10.7	7.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	2.3	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-0.3	-0.2
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.4	0.3

1 Average assets is the nine-quarter average of total assets.
2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.
3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.
4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.
5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.
6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.
7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.24.A. The PNC Financial Services Group, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.3	9.8	9.6
Tier 1 capital ratio	12.4	11.0	10.8
Total capital ratio	14.9	13.0	13.0
Tier 1 leverage ratio	9.4	8.3	8.1
Supplementary leverage ratio	9.3	7.1	6.9

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	15.8	6.5
First-lien mortgages, domestic	0.5	1.5
Junior liens and HELOCs, domestic	0.3	1.9
Commercial and industrial[2]	6.7	7.1
Commercial real estate, domestic	4.8	13.3
Credit cards	1.5	26.2
Other consumer[3]	1.0	4.0
Other loans[4]	1.2	3.1

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	337.0	336.3

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	9.3	2.0
equals		
Net interest income	22.9	5.0
Noninterest income	15.1	3.3
less		
Noninterest expense[2]	28.6	6.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	12.6	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.4	
equals		
Net income before taxes	-3.8	-0.8
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.24.B. The PNC Financial Services Group, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.3	9.6	9.6
Tier 1 capital ratio	12.4	10.8	10.8
Total capital ratio	14.9	13.2	13.2
Tier 1 leverage ratio	9.4	8.2	8.1
Supplementary leverage ratio	9.3	6.9	6.9

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	15.4	6.3
First-lien mortgages, domestic	0.4	1.4
Junior liens and HELOCs, domestic	0.3	1.8
Commercial and industrial[2]	6.7	7.1
Commercial real estate, domestic	4.5	12.4
Credit cards	1.4	23.8
Other consumer[3]	0.9	3.8
Other loans[4]	1.2	3.1

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	337.0	336.4

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	9.3	2.0
equals		
Net interest income	23.1	5.0
Noninterest income	14.9	3.2
less		
Noninterest expense[2]	28.7	6.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	13.4	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.4	
equals		
Net income before taxes	-4.7	-1.0
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.25.A. RBC US Group Holdings LLC

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	16.1	12.7	12.6
Tier 1 capital ratio	16.1	12.7	12.6
Total capital ratio	16.8	13.8	13.8
Tier 1 leverage ratio	9.9	7.7	7.6
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	3.9	6.8
First-lien mortgages, domestic	0.5	3.1
Junior liens and HELOCs, domestic	0.0	3.5
Commercial and industrial[2]	0.9	11.0
Commercial real estate, domestic	1.6	11.3
Credit cards	0.0	23.7
Other consumer[3]	0.2	13.8
Other loans[4]	0.7	3.7

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	83.3	81.8

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	1.9	1.3
equals		
Net interest income	5.3	3.8
Noninterest income	11.0	7.7
less		
Noninterest expense[2]	14.4	10.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	4.2	
Credit losses on investment securities (AFS/HTM)[4]	0.2	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-2.6	-1.8
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.25.B. RBC US Group Holdings LLC

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	16.1	12.4	12.4
Tier 1 capital ratio	16.1	12.4	12.4
Total capital ratio	16.8	13.7	13.7
Tier 1 leverage ratio	9.9	7.5	7.5
Supplementary leverage ratio	n/a	n/a	n/a

[1] The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	3.8	6.5
First-lien mortgages, domestic	0.4	3.0
Junior liens and HELOCs, domestic	0.0	3.3
Commercial and industrial[2]	0.9	11.2
Commercial real estate, domestic	1.5	10.2
Credit cards	0.0	21.7
Other consumer[3]	0.2	12.9
Other loans[4]	0.7	3.8

[1] Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

[2] Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

[3] Other consumer loans include student loans and automobile loans.

[4] Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	83.3	81.7

[1] For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	1.8	1.3
equals		
Net interest income	5.4	3.8
Noninterest income	10.9	7.7
less		
Noninterest expense[2]	14.4	10.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	4.4	
Credit losses on investment securities (AFS/HTM)[4]	0.3	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-2.9	-2.0
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

[1] Average assets is the nine-quarter average of total assets.

[2] Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

[3] Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

[4] For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

[5] Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

[6] Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

[7] Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.26.A. Regions Financial Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	8.9	7.2	7.1
Tier 1 capital ratio	10.4	8.7	8.6
Total capital ratio	12.6	10.8	10.8
Tier 1 leverage ratio	8.4	7.1	7.0
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	6.0	6.9
First-lien mortgages, domestic	0.5	2.7
Junior liens and HELOCs, domestic	0.2	4.3
Commercial and industrial[2]	2.0	7.8
Commercial real estate, domestic	1.8	12.9
Credit cards	0.2	19.3
Other consumer[3]	0.7	12.9
Other loans[4]	0.5	3.0

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	109.5	109.3

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.6	2.5
equals		
Net interest income	7.9	5.4
Noninterest income	5.1	3.5
less		
Noninterest expense[2]	9.4	6.5
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	5.0	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-1.4	-1.0
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.26.B. Regions Financial Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	8.9	7.0	7.0
Tier 1 capital ratio	10.4	8.5	8.5
Total capital ratio	12.6	10.7	10.7
Tier 1 leverage ratio	8.4	6.9	6.9
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	5.8	6.8
First-lien mortgages, domestic	0.5	2.6
Junior liens and HELOCs, domestic	0.2	4.2
Commercial and industrial[2]	2.1	7.9
Commercial real estate, domestic	1.7	12.0
Credit cards	0.2	17.7
Other consumer[3]	0.7	12.2
Other loans[4]	0.5	3.1

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	109.5	109.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.6	2.5
equals		
Net interest income	7.9	5.5
Noninterest income	5.1	3.5
less		
Noninterest expense[2]	9.4	6.5
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	5.3	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-1.7	-1.2
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.27.A. Santander Holdings USA, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	14.3	15.5	14.4
Tier 1 capital ratio	15.7	16.9	15.8
Total capital ratio	17.1	18.3	17.3
Tier 1 leverage ratio	12.4	13.5	12.3
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	9.0	10.0
First-lien mortgages, domestic	0.2	2.9
Junior liens and HELOCs, domestic	0.2	3.8
Commercial and industrial[2]	0.8	5.1
Commercial real estate, domestic	1.1	7.2
Credit cards	0.1	23.7
Other consumer[3]	6.4	16.8
Other loans[4]	0.2	2.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	119.9	119.3

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	7.2	4.7
equals		
Net interest income	14.0	9.2
Noninterest income	8.4	5.5
less		
Noninterest expense[2]	15.3	10.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	4.5	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.4	
equals		
Net income before taxes	2.3	1.5
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.27.B. Santander Holdings USA, Inc.

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	14.3	15.6	14.8
Tier 1 capital ratio	15.7	16.9	16.2
Total capital ratio	17.1	18.3	17.6
Tier 1 leverage ratio	12.4	13.5	12.6
Supplementary leverage ratio	n/a	n/a	n/a

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

n/a Not applicable.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	8.5	9.5
First-lien mortgages, domestic	0.2	2.7
Junior liens and HELOCs, domestic	0.2	3.7
Commercial and industrial[2]	0.8	5.0
Commercial real estate, domestic	1.0	6.6
Credit cards	0.1	21.7
Other consumer[3]	6.1	15.9
Other loans[4]	0.2	2.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	119.9	118.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	7.2	4.7
equals		
Net interest income	14.1	9.2
Noninterest income	8.4	5.5
less		
Noninterest expense[2]	15.3	10.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	4.5	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.5	
equals		
Net income before taxes	2.2	1.4
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.28.A. State Street Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.3	13.3	11.4
Tier 1 capital ratio	14.6	15.6	13.7
Total capital ratio	15.7	16.8	14.9
Tier 1 leverage ratio	6.1	6.5	5.7
Supplementary leverage ratio	8.3	8.2	7.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	1.3	4.9
First-lien mortgages, domestic	0.0	0.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	0.3	6.6
Commercial real estate, domestic	0.1	6.1
Credit cards	0.0	0.0
Other consumer[3]	0.0	0.6
Other loans[4]	0.9	4.5

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	106.8	106.7

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	3.9	1.4
equals		
Net interest income	4.1	1.4
Noninterest income	21.6	7.7
less		
Noninterest expense[2]	21.7	7.8
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	1.5	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	1.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	1.3	0.5
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.5	-0.6

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.28.B. State Street Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	12.3	12.9	11.5
Tier 1 capital ratio	14.6	15.2	13.8
Total capital ratio	15.7	16.4	15.1
Tier 1 leverage ratio	6.1	6.3	5.8
Supplementary leverage ratio	8.3	8.0	7.3

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	1.3	5.0
First-lien mortgages, domestic	0.0	0.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	0.3	6.8
Commercial real estate, domestic	0.1	5.8
Credit cards	0.0	0.0
Other consumer[3]	0.0	0.6
Other loans[4]	0.9	4.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	106.8	106.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	4.0	1.4
equals		
Net interest income	4.3	1.5
Noninterest income	21.5	7.7
less		
Noninterest expense[2]	21.8	7.8
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	1.6	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	1.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	1.3	0.4
Memo items		
Other comprehensive income[7]	-0.4	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.5	-0.9

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.29.A. TD Group US Holdings LLC

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	16.3	16.0	15.4
Tier 1 capital ratio	16.3	16.0	15.4
Total capital ratio	17.5	16.8	16.7
Tier 1 leverage ratio	8.5	8.4	8.1
Supplementary leverage ratio	9.4	7.5	7.2

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	11.2	6.6
First-lien mortgages, domestic	0.6	2.1
Junior liens and HELOCs, domestic	0.3	4.0
Commercial and industrial[2]	2.3	6.5
Commercial real estate, domestic	2.4	8.2
Credit cards	3.8	30.1
Other consumer[3]	0.9	3.4
Other loans[4]	0.9	3.1

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	232.5	234.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	9.7	2.0
equals		
Net interest income	21.3	4.5
Noninterest income	8.0	1.7
less		
Noninterest expense[2]	19.6	4.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	9.7	
Credit losses on investment securities (AFS/HTM)[4]	0.2	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-0.2	0.0
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.29.B. TD Group US Holdings LLC

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	16.3	16.0	15.6
Tier 1 capital ratio	16.3	16.0	15.6
Total capital ratio	17.5	17.1	16.8
Tier 1 leverage ratio	8.5	8.4	8.2
Supplementary leverage ratio	9.4	7.5	7.3

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	10.7	6.3
First-lien mortgages, domestic	0.6	2.0
Junior liens and HELOCs, domestic	0.3	3.9
Commercial and industrial[2]	2.3	6.6
Commercial real estate, domestic	2.2	7.7
Credit cards	3.5	27.6
Other consumer[3]	0.8	3.2
Other loans[4]	0.9	3.2

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	232.5	234.5

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	9.8	2.1
equals		
Net interest income	21.6	4.5
Noninterest income	7.8	1.6
less		
Noninterest expense[2]	19.7	4.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	9.9	
Credit losses on investment securities (AFS/HTM)[4]	0.2	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-0.3	-0.1
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.30.A. Truist Financial Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3
Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.7	7.9	7.8
Tier 1 capital ratio	11.6	9.8	9.7
Total capital ratio	14.0	12.5	12.5
Tier 1 leverage ratio	9.0	7.7	7.6
Supplementary leverage ratio	8.5	6.7	6.6

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	19.2	6.3
First-lien mortgages, domestic	1.0	2.0
Junior liens and HELOCs, domestic	0.4	2.7
Commercial and industrial[2]	4.4	6.1
Commercial real estate, domestic	7.0	11.8
Credit cards	0.7	19.0
Other consumer[3]	3.9	7.1
Other loans[4]	1.7	3.7

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3
Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	382.8	381.2

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	12.2	2.4
equals		
Net interest income	27.5	5.5
Noninterest income	19.8	3.9
less		
Noninterest expense[2]	35.1	7.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	17.3	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.2	
equals		
Net income before taxes	-5.5	-1.1
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.30.B. Truist Financial Corporation

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.7	7.7	7.7
Tier 1 capital ratio	11.6	9.6	9.6
Total capital ratio	14.0	12.5	12.5
Tier 1 leverage ratio	9.0	7.5	7.5
Supplementary leverage ratio	8.5	6.6	6.6

[1] The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	18.4	6.1
First-lien mortgages, domestic	1.0	1.9
Junior liens and HELOCs, domestic	0.4	2.6
Commercial and industrial[2]	4.4	6.1
Commercial real estate, domestic	6.6	11.2
Credit cards	0.6	17.5
Other consumer[3]	3.7	6.7
Other loans[4]	1.8	3.8

[1] Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

[2] Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

[3] Other consumer loans include student loans and automobile loans.

[4] Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	382.8	380.6

[1] For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	12.1	2.4
equals		
Net interest income	27.6	5.5
Noninterest income	19.6	3.9
less		
Noninterest expense[2]	35.2	7.0
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	18.2	
Credit losses on investment securities (AFS/HTM)[4]	0.1	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.4	
equals		
Net income before taxes	-6.6	-1.3
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

[1] Average assets is the nine-quarter average of total assets.

[2] Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

[3] Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

[4] For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

[5] Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

[6] Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

[7] Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.31.A. UBS Americas Holding LLC

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	21.0	17.8	16.7
Tier 1 capital ratio	25.8	23.1	22.1
Total capital ratio	27.0	24.8	23.6
Tier 1 leverage ratio	11.3	9.2	8.7
Supplementary leverage ratio	11.2	7.8	7.4

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	1.1	2.0
First-lien mortgages, domestic	0.4	2.0
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	0.1	2.4
Commercial real estate, domestic	0.0	2.0
Credit cards	0.0	23.7
Other consumer[3]	0.2	0.9
Other loans[4]	0.3	6.9

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	64.4	56.9

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	2.5	1.5
equals		
Net interest income	4.1	2.5
Noninterest income	26.0	16.1
less		
Noninterest expense[2]	27.6	17.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	1.3	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	1.2	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-0.1	-0.1
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.31.B. UBS Americas Holding LLC

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	21.0	17.6	16.7
Tier 1 capital ratio	25.8	22.9	22.1
Total capital ratio	27.0	24.8	23.6
Tier 1 leverage ratio	11.3	9.1	8.7
Supplementary leverage ratio	11.2	7.8	7.5

[1] The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	1.0	1.9
First-lien mortgages, domestic	0.3	1.9
Junior liens and HELOCs, domestic	0.0	0.0
Commercial and industrial[2]	0.1	2.5
Commercial real estate, domestic	0.0	1.8
Credit cards	0.0	21.7
Other consumer[3]	0.2	0.9
Other loans[4]	0.3	6.9

[1] Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

[2] Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

[3] Other consumer loans include student loans and automobile loans.

[4] Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	64.4	56.9

[1] For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	2.4	1.5
equals		
Net interest income	4.1	2.5
Noninterest income	26.0	16.0
less		
Noninterest expense[2]	27.6	17.1
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	1.3	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	1.2	
Other losses/gains[6]	0.1	
equals		
Net income before taxes	-0.2	-0.1
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	0.0	0.0

[1] Average assets is the nine-quarter average of total assets.

[2] Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

[3] Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

[4] For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

[5] Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

[6] Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

[7] Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.32.A. U.S. Bancorp

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.0	8.0	7.6
Tier 1 capital ratio	10.6	9.6	9.2
Total capital ratio	12.8	11.5	11.4
Tier 1 leverage ratio	8.0	7.2	6.9
Supplementary leverage ratio	7.1	5.8	5.6

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	23.1	7.6
First-lien mortgages, domestic	1.3	1.9
Junior liens and HELOCs, domestic	0.6	4.0
Commercial and industrial[2]	6.7	7.5
Commercial real estate, domestic	6.6	17.3
Credit cards	5.0	23.7
Other consumer[3]	1.7	3.9
Other loans[4]	1.3	4.6

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	401.8	399.6

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	16.7	3.1
equals		
Net interest income	27.0	4.9
Noninterest income	23.7	4.3
less		
Noninterest expense[2]	34.0	6.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	19.8	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-3.1	-0.6
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.1	-0.1

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.32.B. U.S. Bancorp

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	9.0	7.9	7.8
Tier 1 capital ratio	10.6	9.5	9.4
Total capital ratio	12.8	11.7	11.6
Tier 1 leverage ratio	8.0	7.2	7.1
Supplementary leverage ratio	7.1	5.8	5.7

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	22.1	7.3
First-lien mortgages, domestic	1.3	1.8
Junior liens and HELOCs, domestic	0.5	3.9
Commercial and industrial[2]	6.6	7.5
Commercial real estate, domestic	6.3	16.3
Credit cards	4.6	21.7
Other consumer[3]	1.5	3.5
Other loans[4]	1.3	4.7

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	401.8	400.0

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	16.8	3.1
equals		
Net interest income	27.3	5.0
Noninterest income	23.6	4.3
less		
Noninterest expense[2]	34.1	6.2
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	20.4	
Credit losses on investment securities (AFS/HTM)[4]	0.0	
Trading and counterparty losses[5]	0.0	
Other losses/gains[6]	0.0	
equals		
Net income before taxes	-3.6	-0.7
Memo items		
Other comprehensive income[7]	0.0	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.1	-0.1

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Table B.33.A. Wells Fargo & Company

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Severely adverse scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.0	8.7	8.3
Tier 1 capital ratio	12.6	10.4	9.9
Total capital ratio	15.9	13.4	13.3
Tier 1 leverage ratio	8.0	6.5	6.2
Supplementary leverage ratio	7.5	5.3	5.1

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	1,213.1	1,204.5

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	39.4	2.0
equals		
Net interest income	99.5	5.1
Noninterest income	76.3	3.9
less		
Noninterest expense[2]	136.5	6.9
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	52.0	
Credit losses on investment securities (AFS/HTM)[4]	0.6	
Trading and counterparty losses[5]	10.4	
Other losses/gains[6]	1.6	
equals		
Net income before taxes	-25.2	-1.3
Memo items		
Other comprehensive income[7]	1.7	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.6	1.2

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	59.9	6.5
First-lien mortgages, domestic	4.9	1.8
Junior liens and HELOCs, domestic	0.7	2.0
Commercial and industrial[2]	13.1	7.2
Commercial real estate, domestic	19.1	14.9
Credit cards	8.2	22.8
Other consumer[3]	3.9	5.4
Other loans[4]	10.0	5.0

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Table B.33.B. Wells Fargo & Company

Projected stressed capital ratios, risk-weighted assets, losses, revenues, net income before taxes, and loan losses

Federal Reserve estimates: Alternative severe scenario

Capital ratios, actual 2020:Q2 and projected 2020:Q3–2022:Q3

Percent

Regulatory ratio	Actual 2020:Q2	Stressed capital ratios[1]	
		Ending	Minimum
Common equity tier 1 capital ratio	11.0	8.4	8.3
Tier 1 capital ratio	12.6	10.0	9.9
Total capital ratio	15.9	13.4	13.3
Tier 1 leverage ratio	8.0	6.3	6.2
Supplementary leverage ratio	7.5	5.2	5.1

1 The capital ratios are calculated using the same capital action assumptions provided within the Dodd-Frank Act stress testing rule. See 12 C.F.R. § 252.56(b). These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. The minimum capital ratios are for the period 2020:Q3 to 2022:Q3. Supplementary leverage ratio projections only include estimates for firms subject to Category I, II, or III standards.

Projected loan losses, by type of loan, 2020:Q3–2022:Q3

Loan type	Billions of dollars	Portfolio loss rates (percent)[1]
Loan losses	57.8	6.3
First-lien mortgages, domestic	4.7	1.8
Junior liens and HELOCs, domestic	0.7	1.9
Commercial and industrial[2]	13.2	7.3
Commercial real estate, domestic	17.9	14.0
Credit cards	7.5	21.0
Other consumer[3]	3.7	5.1
Other loans[4]	10.0	5.0

1 Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.

Risk-weighted assets, actual 2020:Q2 and projected 2022:Q3

Billions of dollars

Item	Actual 2020:Q2	Projected 2022:Q3
Risk-weighted assets[1]	1,213.1	1,204.5

1 For each quarter, risk-weighted assets are calculated under the Board's standardized capital risk-based approach in 12 C.F.R. pt. 217, subpt. D.

Projected losses, revenue, and net income before taxes through 2022:Q3

Item	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue	38.9	2.0
equals		
Net interest income	100.2	5.1
Noninterest income	75.5	3.8
less		
Noninterest expense[2]	136.8	6.9
Other revenue[3]	0.0	
less		
Provisions for loan and lease losses	54.2	
Credit losses on investment securities (AFS/HTM)[4]	0.6	
Trading and counterparty losses[5]	10.4	
Other losses/gains[6]	1.8	
equals		
Net income before taxes	-28.1	-1.4
Memo items		
Other comprehensive income[7]	-0.1	
Other effects on capital	*Actual 2020:Q2*	*2022:Q3*
AOCI included in capital (billions of dollars)	-0.6	-0.7

1 Average assets is the nine-quarter average of total assets.

2 Noninterest expense includes losses from operational-risk events and other real estate owned (OREO) costs.

3 Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.

4 For firms that have adopted ASU 2016-13, the Federal Reserve incorporated its projection of expected credit losses on securities in the allowance for credit losses.

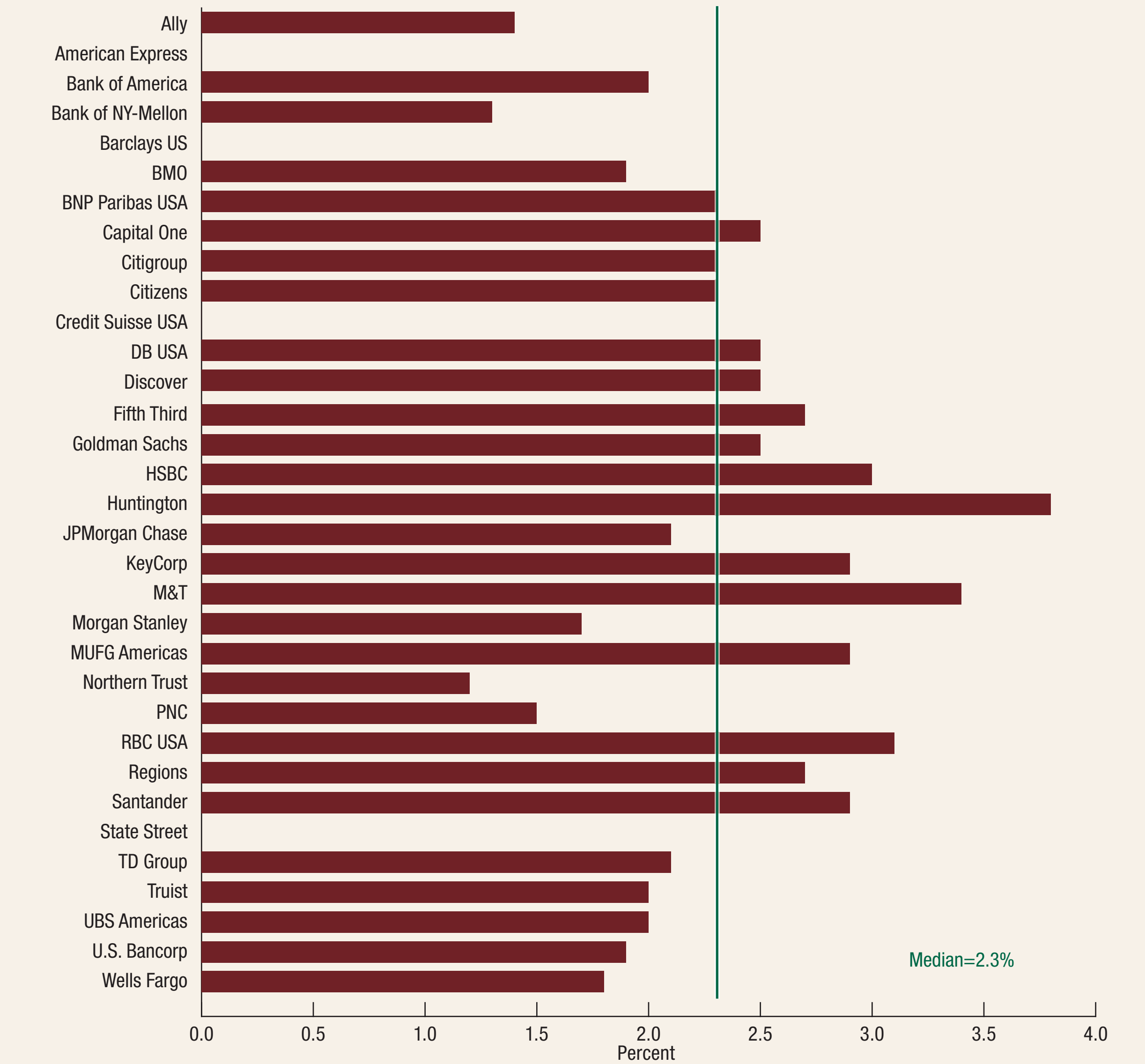
5 Trading and counterparty losses include mark-to-market and credit valuation adjustment (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

6 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option, and goodwill impairment losses.

7 Other comprehensive income is only calculated for firms subject to Category I or II standards or firms that opt in to including accumulated other comprehensive income (AOCI) in their calculation of capital.

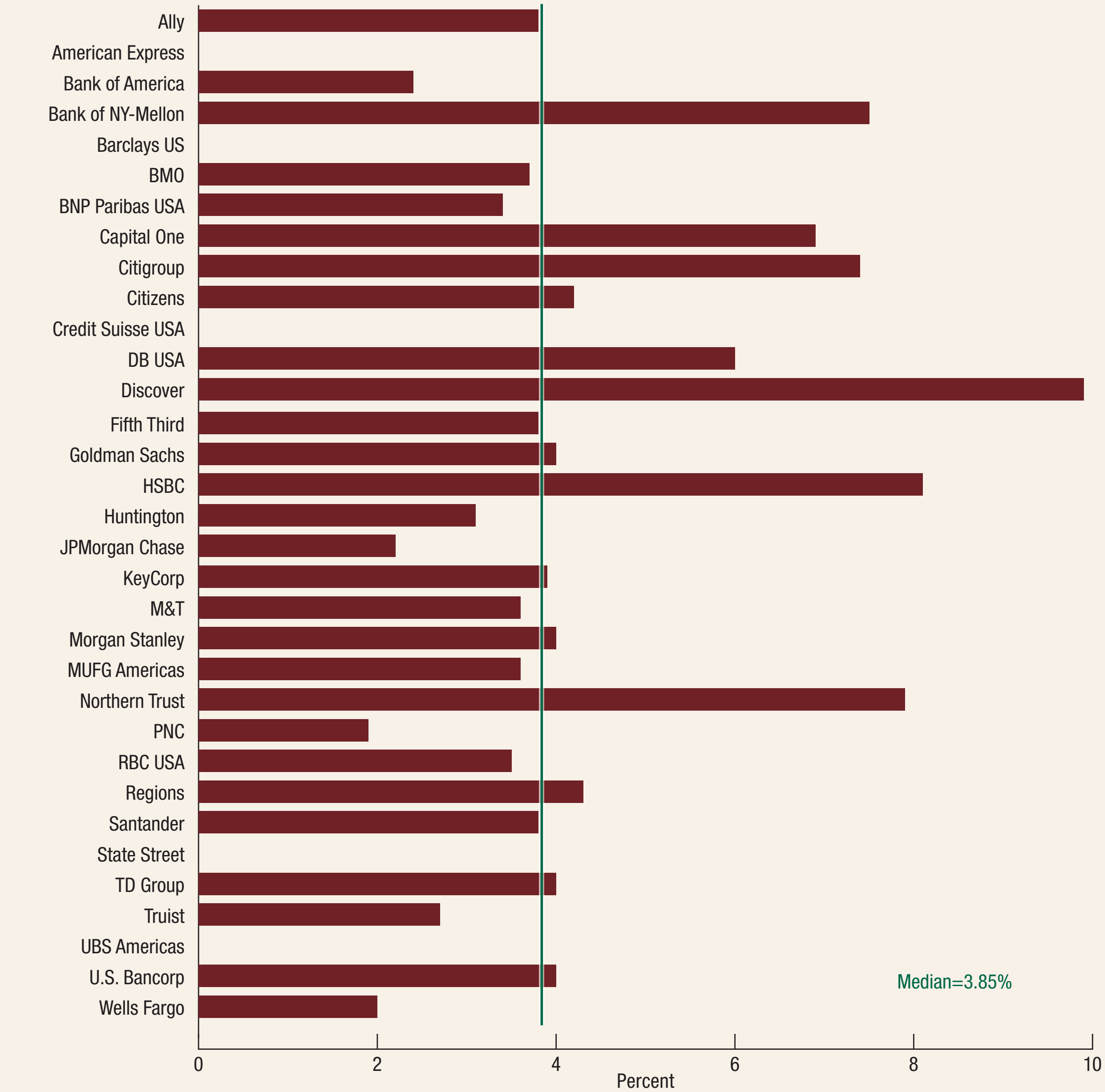
Appendix C: Additional Aggregate Results

Figure C.1. First-lien mortgages, domestic loss rates in the severely adverse scenario



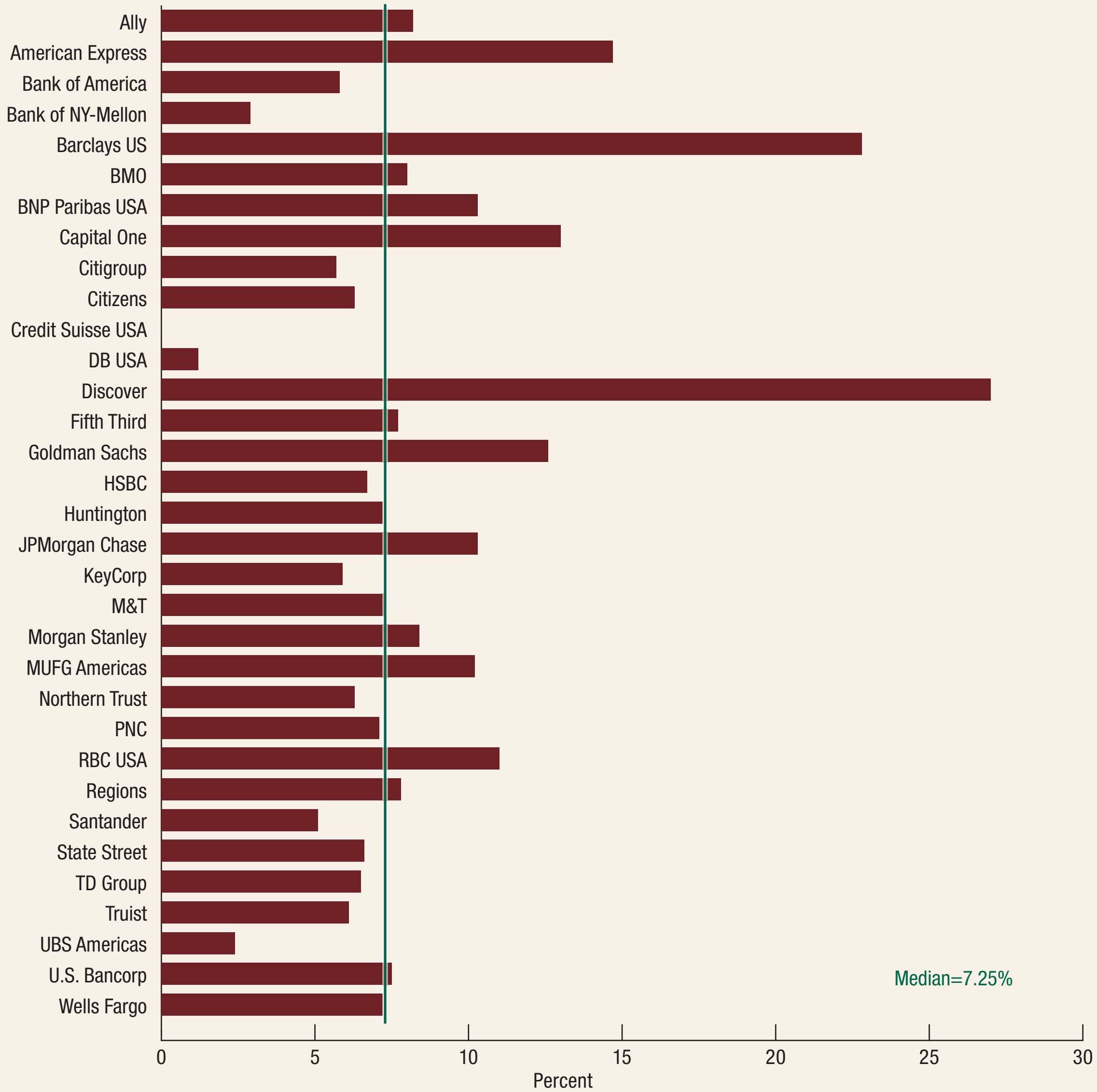
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

Figure C.2. Junior liens and HELOCs, domestic loss rates in the severely adverse scenario



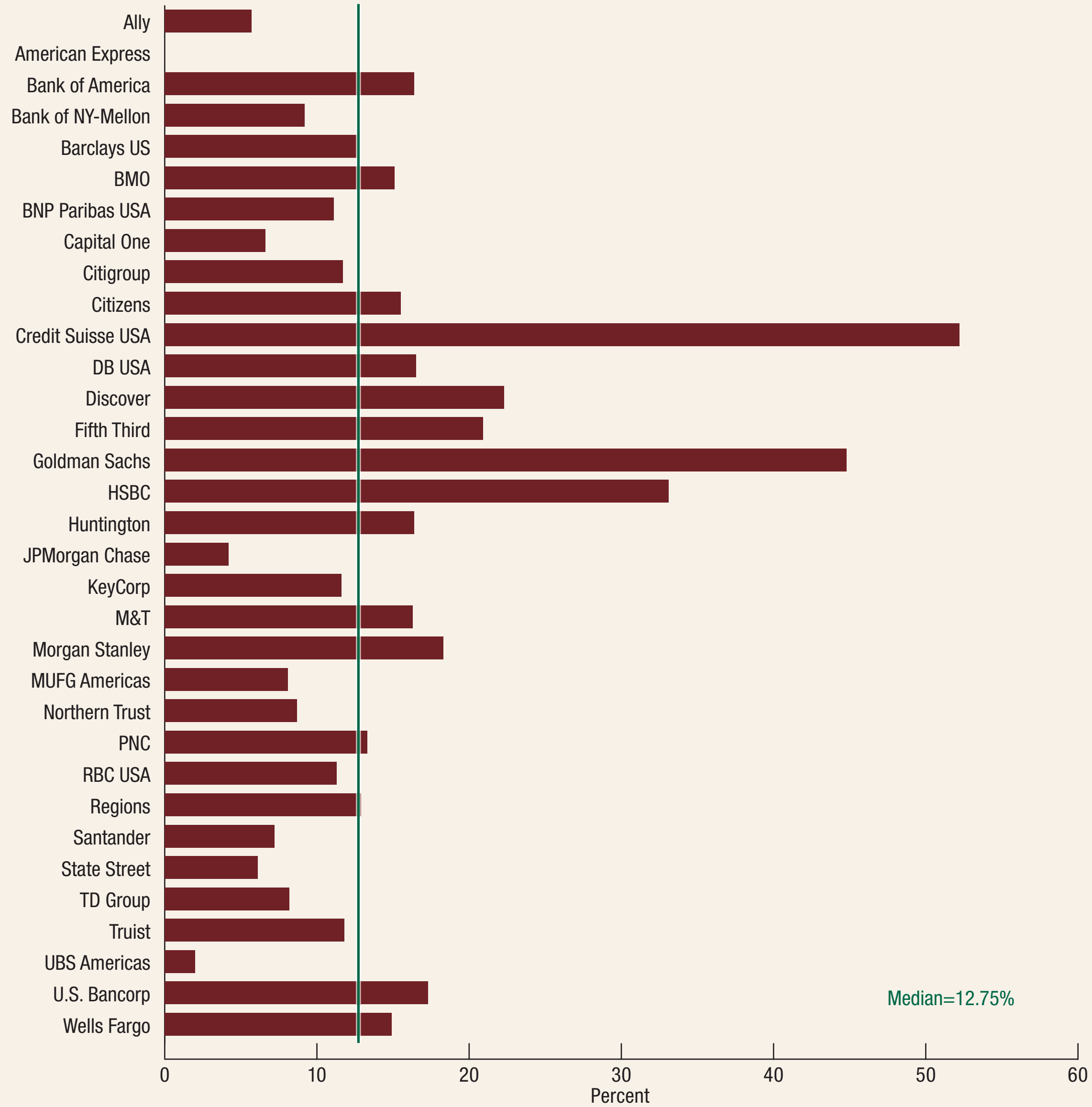
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

Figure C.3. Commercial and industrial loss rates in the severely adverse scenario



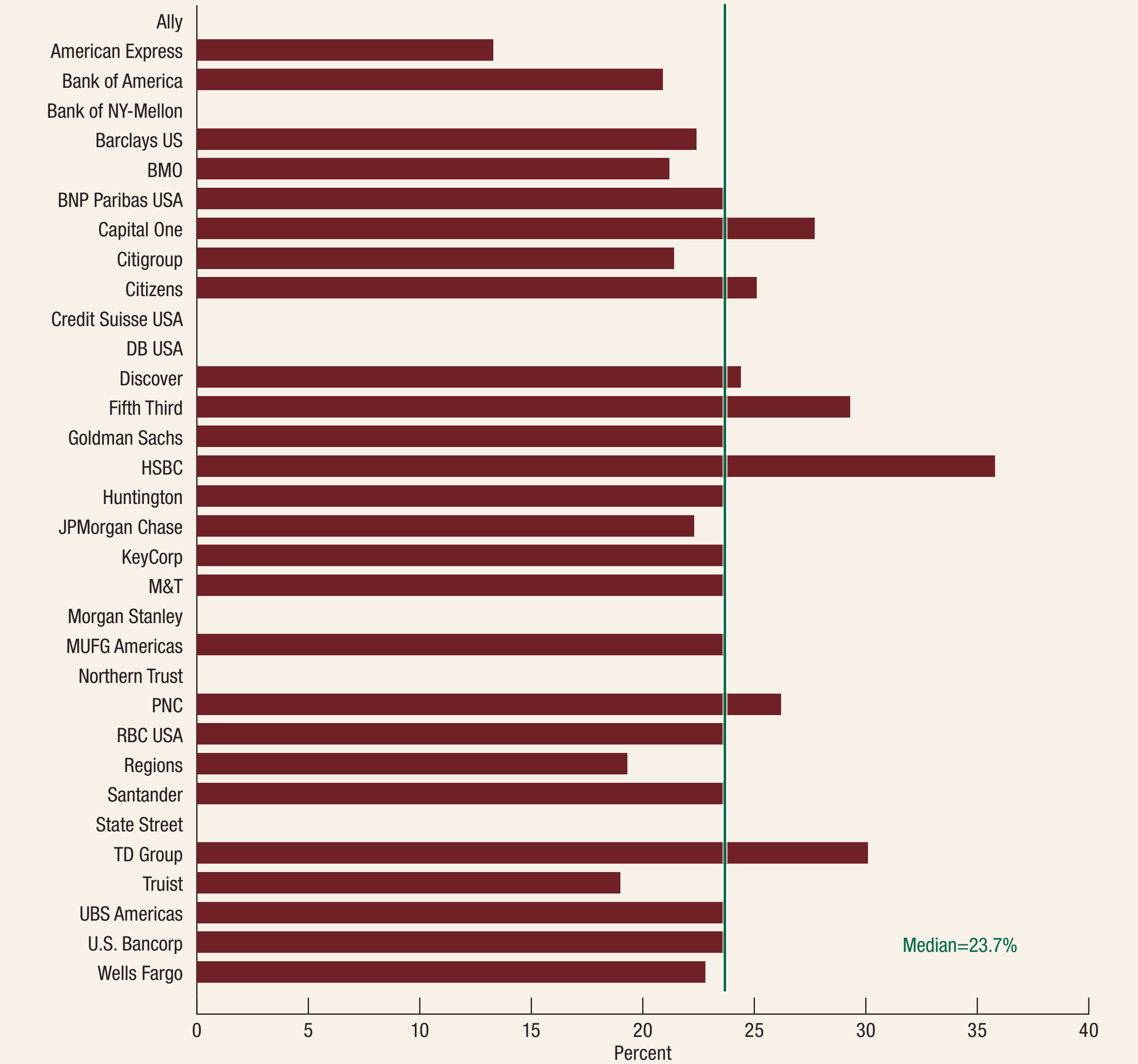
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters. Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

Figure C.4. Commercial real estate, domestic loss rates in the severely adverse scenario



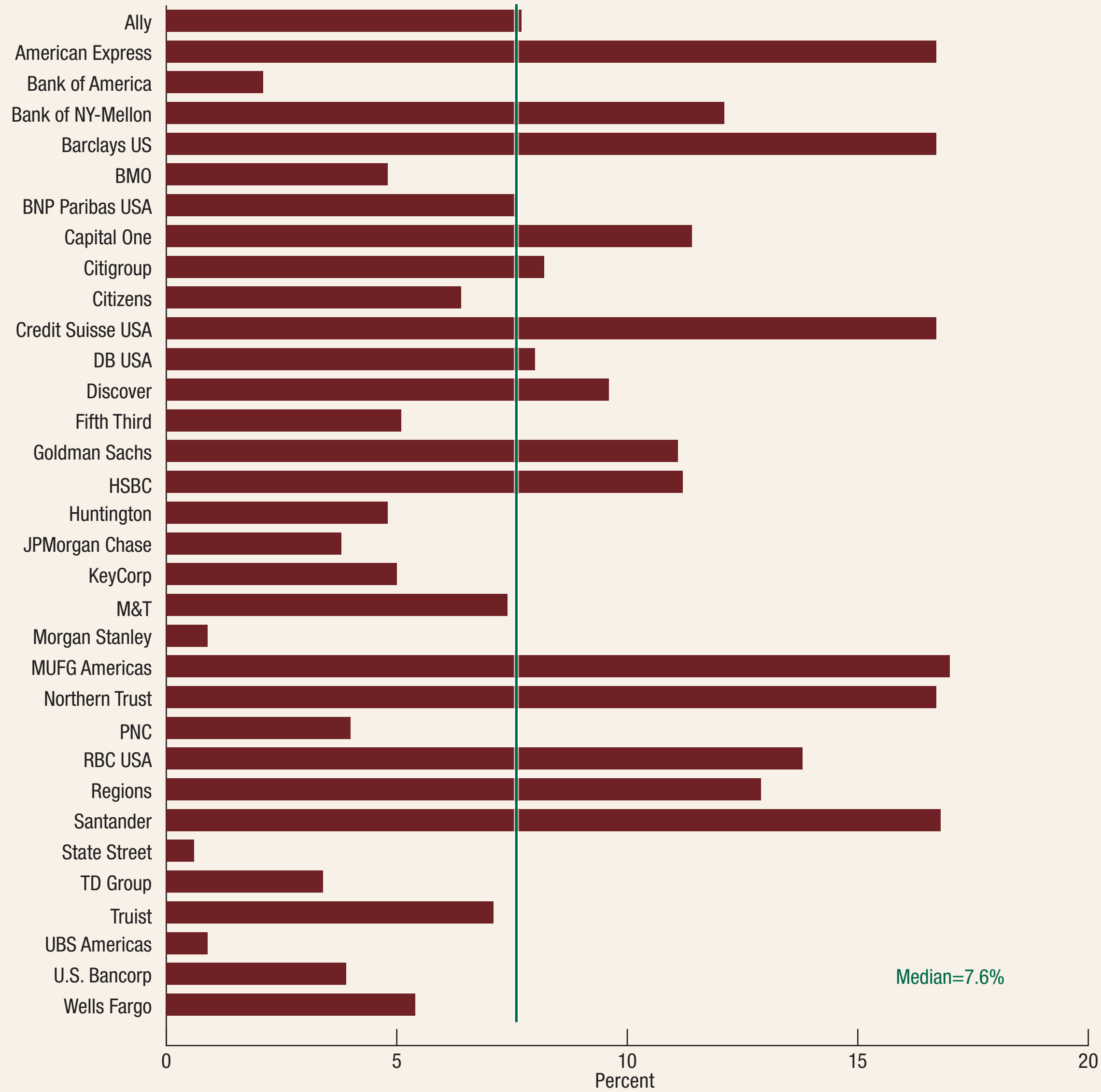
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

Figure C.5. Credit card loss rates in the severely adverse scenario



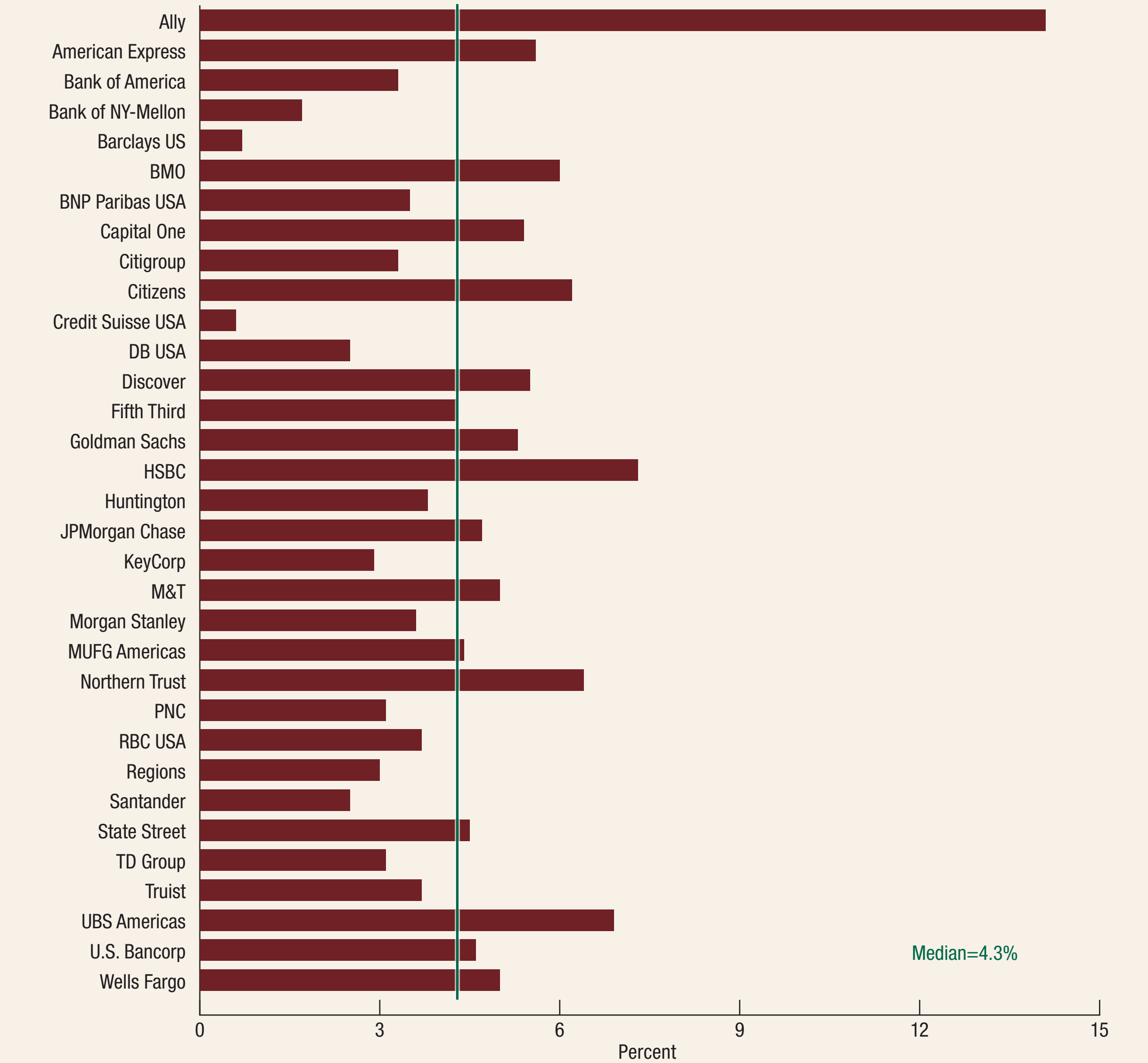
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

Figure C.6. Other consumer loss rates in the severely adverse scenario



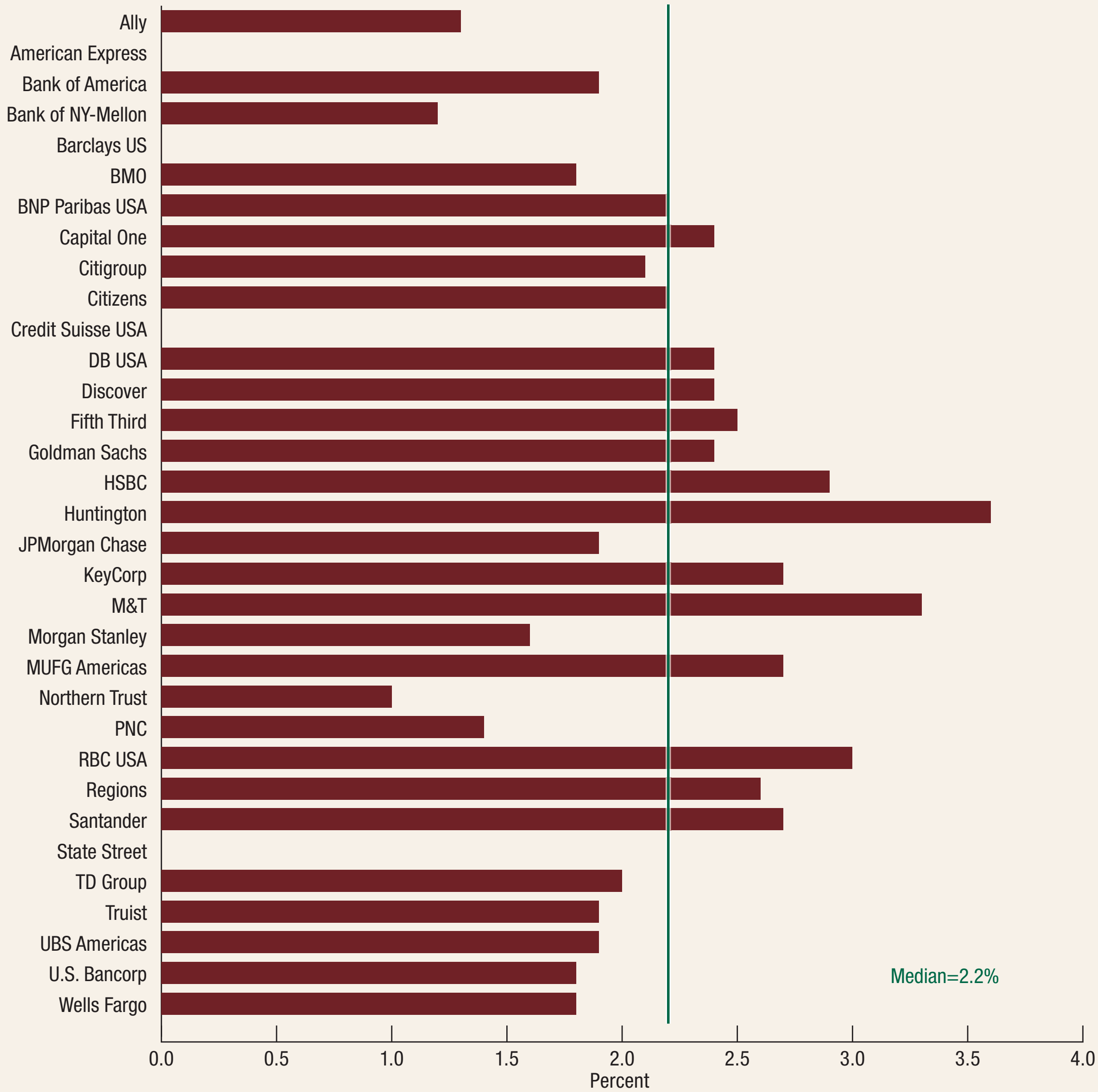
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters. Other consumer loans include student loans and automobile loans.

Figure C.7. Other loans loss rates in the severely adverse scenario



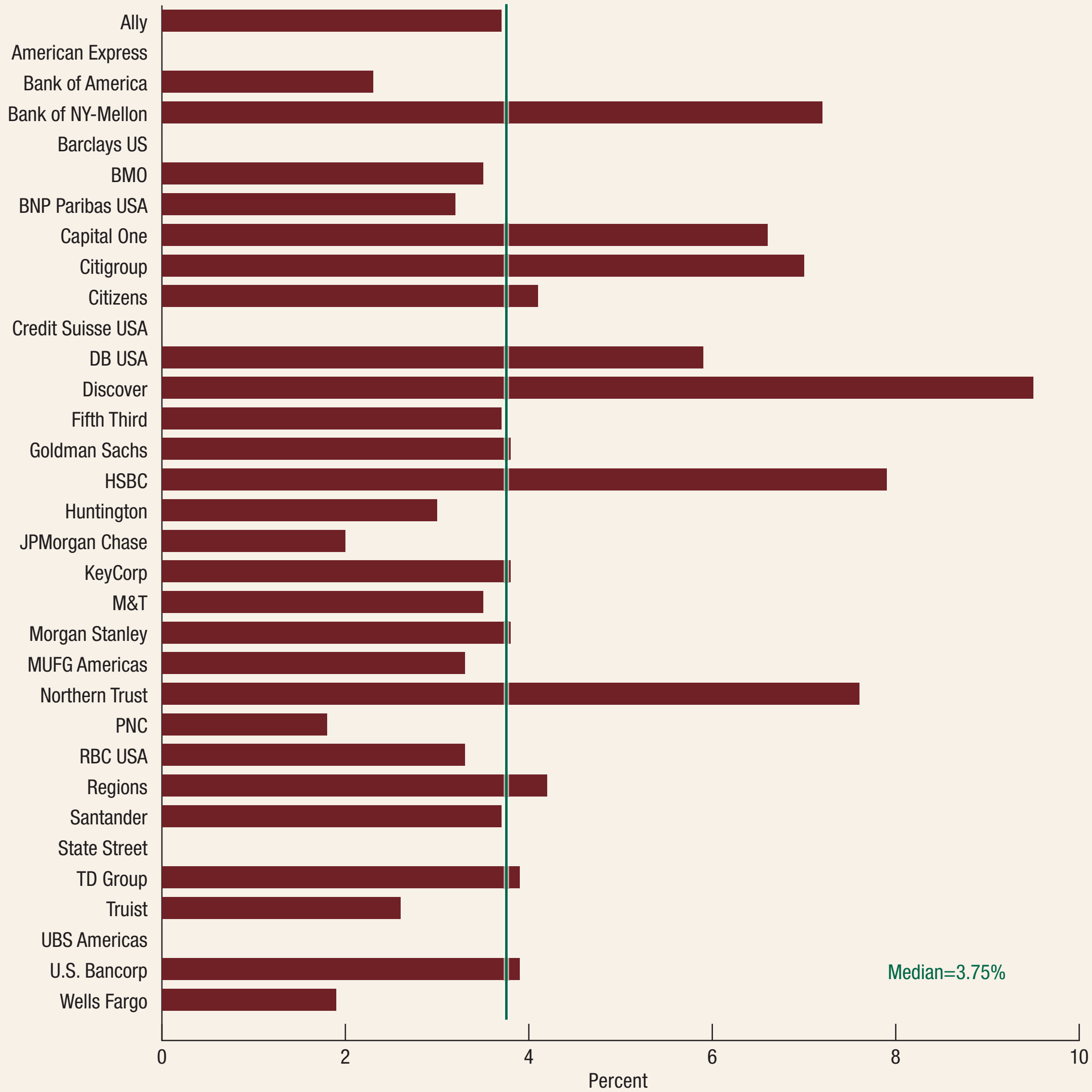
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters. Other loans include international real estate loans.

Figure C.8. First-lien mortgages, domestic loss rates in the alternative severe scenario



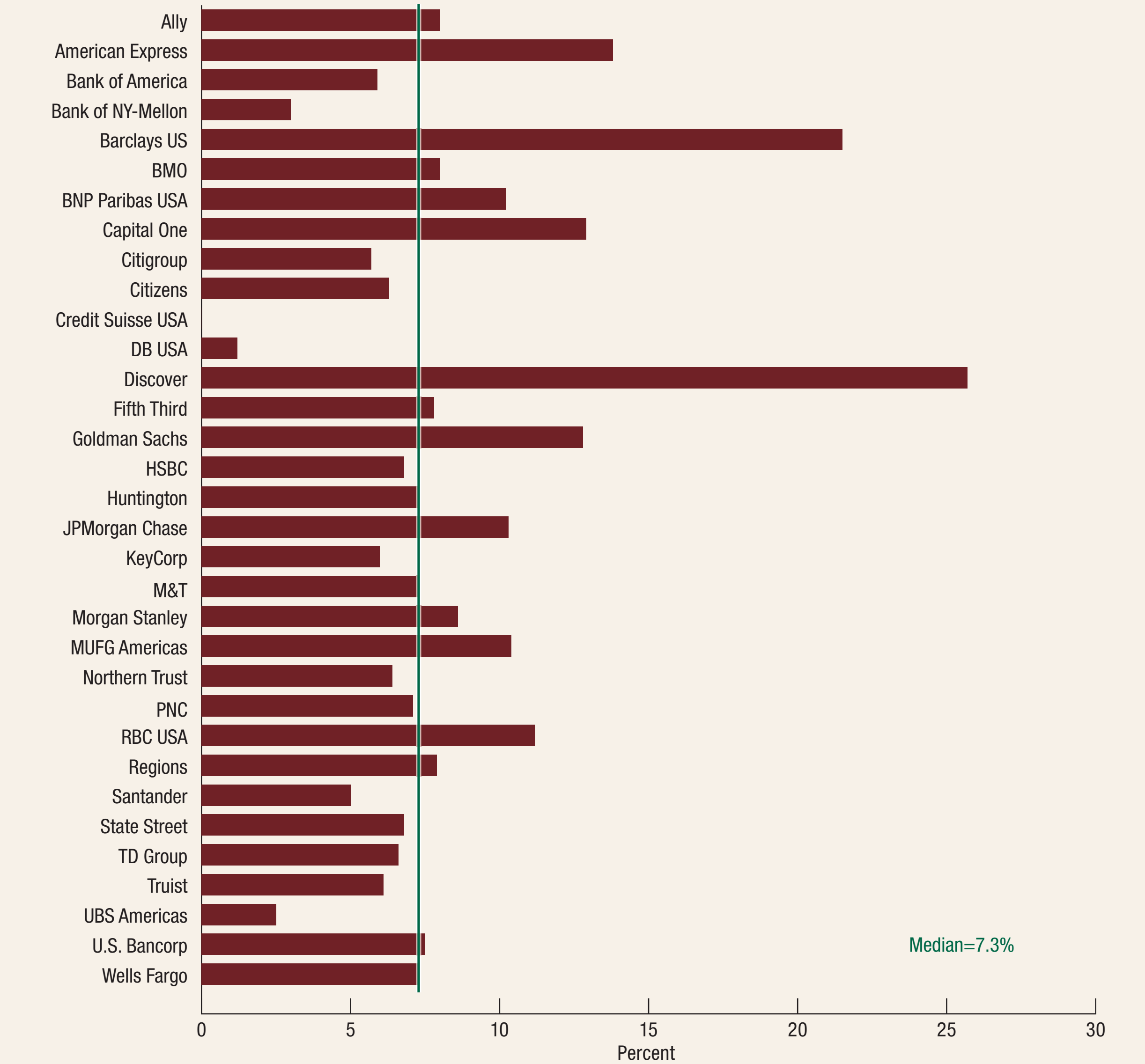
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

Figure C.9. Junior liens and HELOCs, domestic loss rates in the alternative severe scenario



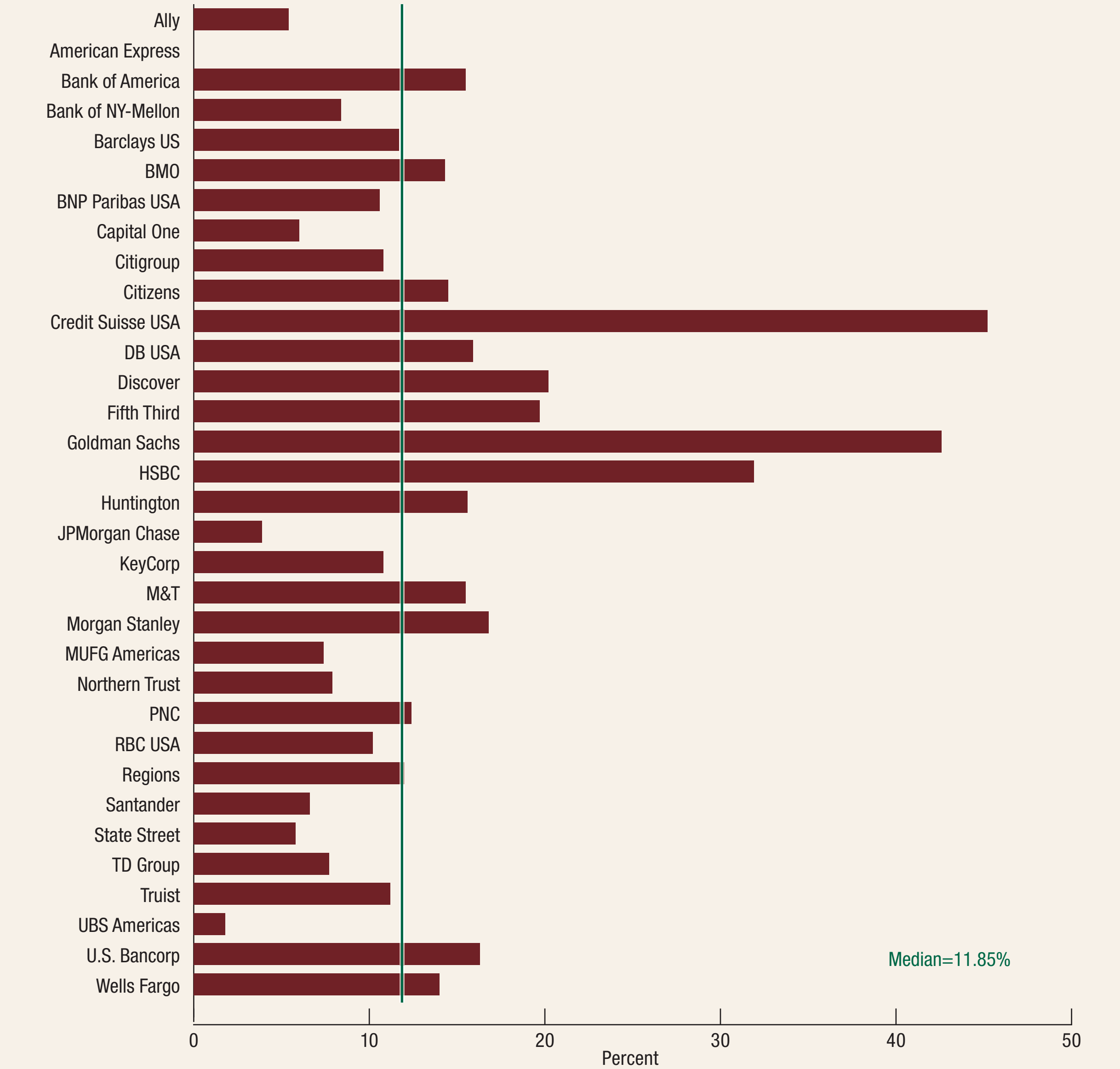
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

Figure C.10. Commercial and industrial loss rates in the alternative severe scenario



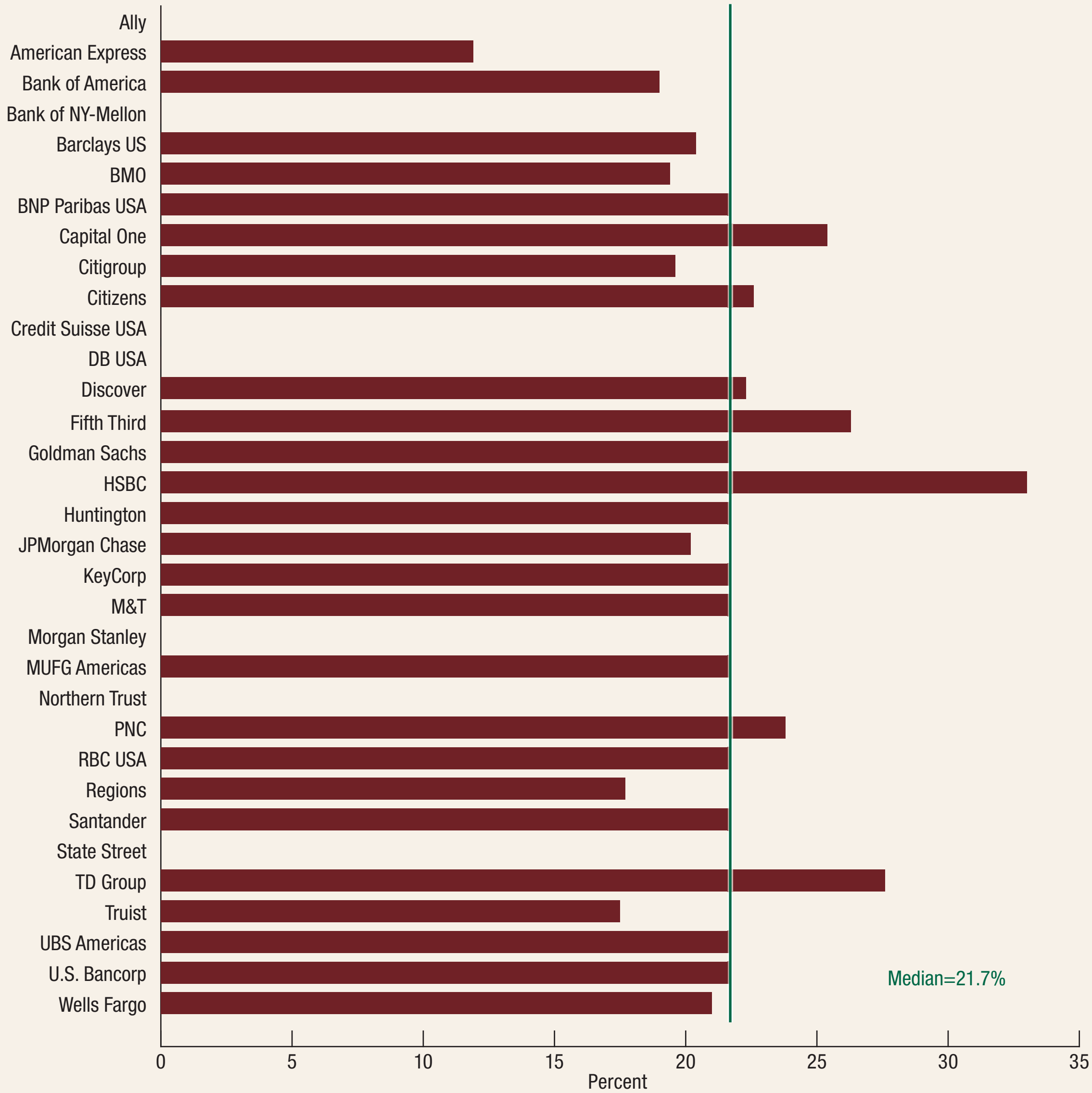
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters. Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

Figure C.11. Commercial real estate, domestic loss rates in the alternative severe scenario



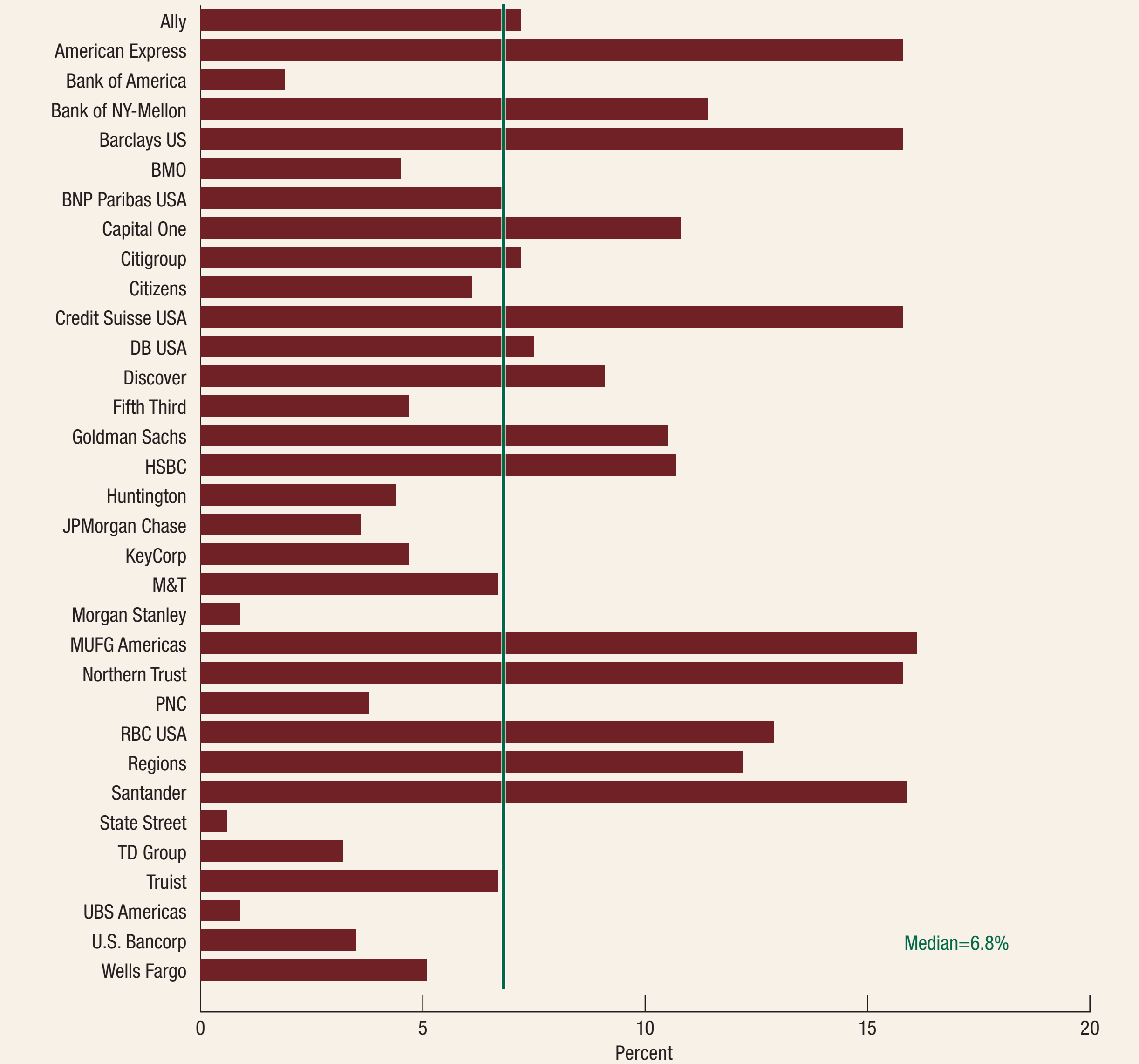
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

Figure C.12. Credit card loss rates in the alternative severe scenario



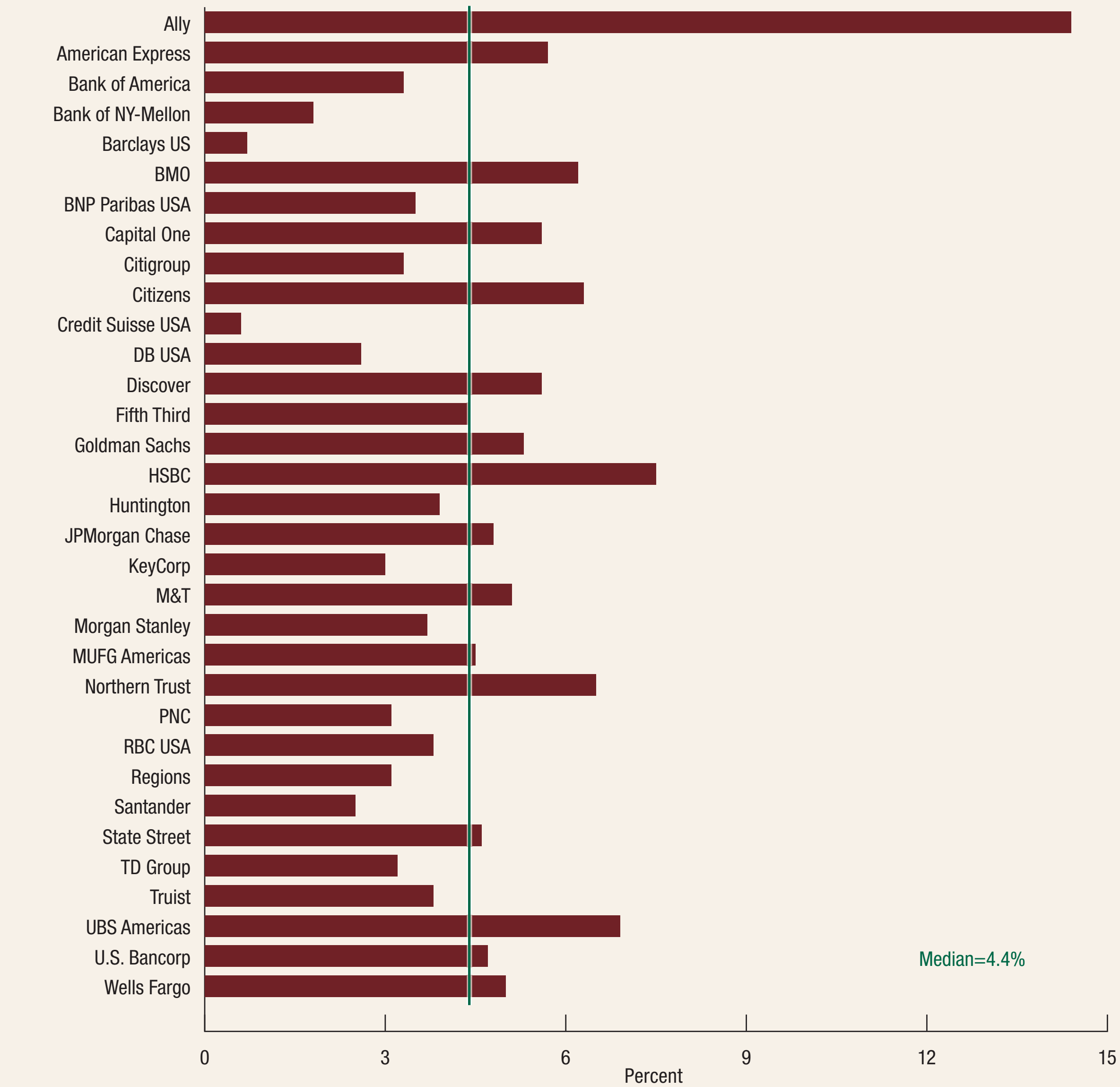
Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters.

Figure C.13. Other consumer loss rates in the alternative severe scenario



Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters. Other consumer loans include student loans and automobile loans.

Figure C.14. Other loans loss rates in the alternative severe scenario



Note: Average loan balances used to calculate portfolio loss rates exclude loans held for sale, loans held for investment under the fair-value option, and PPP loans and are calculated over nine quarters. Other loans include international real estate loans.

Appendix D: Technical Information about the Capital Plan Resubmission and Distribution Limitations

In the second quarter of 2020, the Board determined that the changes in financial markets or the macroeconomic outlook could have a material effect on each firm's risk profile and financial condition and require updated capital plans.[46] As such, the Board required each firm subject to the Board's capital plan rule to update and resubmit its capital plan. As a result of a capital plan resubmission, firms are prohibited from making any capital distribution (excluding any capital distribution arising from the issuance of a capital instrument eligible for inclusion in the numerator of a regulatory capital ratio), unless otherwise approved by the Board.

The Board is authorizing each U.S. bank holding company (BHC) to make the following capital distributions in the first quarter of 2021:

- provided that the firm does not increase the amount of its common stock dividends to be larger than the level paid in the second quarter of 2020, pay common stock dividends and make share repurchases that, in the aggregate, do not exceed an amount equal to the average of the firm's net income for the four preceding calendar quarters,[47] except that:
  —if the average of the firm's net income for the four preceding calendar quarters does not exceed an amount equal to one cent per share, the firm may pay common stock dividends of one cent per share;
- make share repurchases that equal the amount of share issuances related to expensed employee compensation; and
- redeem and make scheduled payments on additional tier 1 and tier 2 capital instruments.

Foreign banks operating in the U.S. have different payout behavior than domestic banks. In general, the U.S. operations tend to pay a lump sum to the parent foreign bank at the end of the year, instead of quarterly payments.

In light of their unique payout behavior, the Board's authorization is modified for U.S. intermediate holding companies (U.S. IHCs) of foreign banks. Specifically the Board is authorizing each U.S. IHC to make the following capital distributions in the first quarter of 2021:

- pay common stock dividends and make share repurchases such that the aggregate amount of dividends and repurchases paid in the final three quarters of 2020 and the first quarter of 2021 does not exceed the amount of net income the firm has earned in the preceding four calendar quarters, except that:
  —if the average of the firm's net income for the four preceding calendar quarters does not exceed an amount equal to one cent per share, the firm may pay common stock dividends of one cent per share;
- make share repurchases that equal the amount of share issuances related to expensed employee compensation; and
- redeem and make scheduled payments on additional tier 1 and tier 2 capital instruments.

In addition, for both U.S. BHCs and U.S. IHCs, the automatic distribution limitations under the Board's capital rule would continue to apply to a firm with a capital ratio below its total capital requirement, inclusive of the firm's applicable stress capital buffer requirement.

Additionally, as a result of a capital plan resubmission, the Board may elect to recalculate a firm's stress capital buffer requirement. The Board is required to provide notice of whether the firm's stress capital buffer requirement will be recalculated

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[46] See 12 C.F.R § 225.8(e)(4)(i)(B)(3).

[47] The amount of common stock dividends is calculated on a per-share basis. An "increase" for this purpose is measured relative to the amount of common stock dividends paid in the second quarter of 2020.

within 75 calendar days after the date on which the capital plan is resubmitted, unless the Board provides notice to the firm that it is extending the time period. Due to uncertainty about future economic conditions and the ultimate path of the current recovery, the Board is extending the time period to notify firms whether their stress capital buffer requirements will be recalculated until March 31, 2021.[48]

[48] See 12 C.F.R § 225.8(f)(3).