



Building a better working world

Capital management: a look ahead post-CCAR 2019

June 2019

Results by the numbers¹

18 of 18

Participating firms received a non-objection to their capital plan (including one conditional non-objection)²

570 bps

CET1 ratio depletion from actuals to stress trough, in aggregate across the 18 participating firms this year

5.7%

Average loan loss rate for 18 participating firms, down by 50 bps from 6.2% in DFAST 2018

2.4%

Average PPNR, down by 30 bps from 2.7% in DFAST 2018

2.0%

Risk-weighted assets (RWA) growth this year, down by 310 bps from 5.1% in DFAST 2018

\$90b

Total trading and counterparty losses this year, down from \$112b in DFAST 2018

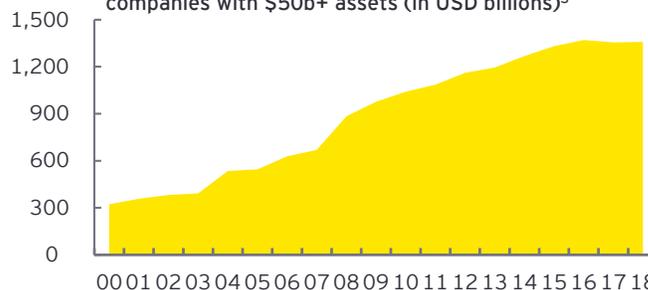
The Federal Reserve Board (FRB) released this year's Dodd-Frank Act Stress Test (DFAST) and Comprehensive Capital Analysis and Review (CCAR) results on June 21 and June 27, 2019, respectively.

Only the largest and most complex banks, representing about 70% of the assets of all banks operating in the US, were included in the stress tests. Sixteen smaller and less complex banks (\$50b-\$250b in assets) that were included in DFAST 2018 were not part of this year's stress tests. Going forward, banks less than \$100b will no longer be part of the DFAST supervisory program, and the FRB has proposed moving to a two-year cycle for firms that have \$100b-\$250b in assets.

Overall highlights

- ▶ **Less stress impact in line with expectations, given the general level of severity of this year's scenario compared with last year.** Common equity Tier 1 (CET1) and Tier 1 leverage ratio declines are smaller compared with last year for 13 of the 18 firms.
- ▶ While all firms exhibit strong capital ratios even post-stress, in general, the **nature of this year's severely adverse scenario resulted in a greater decline in stress impacts for firms with large trading and capital markets businesses**, relative to firms with only a consumer and commercial banking presence.
- ▶ Consistent with less severe global market shocks (GMS) in the severely adverse scenario this year, DFAST results show an **aggregate decline in trading and counterparty losses for legacy GMS firms** when compared with last year. In contrast, trading and counterparty losses increased in aggregate for foreign banking organizations (FBOs) who are applying full GMS this cycle for the first time.
- ▶ **Changes to FRB models also impacted stress results.** Refinements to the FRB credit card, auto loan, commercial real estate and debt fair value models resulted in slightly higher estimated losses or other comprehensive income. Refinements to the FRB corporate loan model resulted in slightly lower estimated losses. Finally, re-estimation of the FRB pre-provision net revenue (PPNR) model to better reflect recent performance resulted in a small decrease in aggregate PPNR, particularly for net interest income.
- ▶ **FRB continues to increase the transparency of its supervisory stress-testing program.** For the first time, PPNR disclosure included component results covering net interest income, non-interest income and non-interest expense. The FRB also plans to post a data set of all past results to facilitate public analysis of the supervisory stress test results.
- ▶ The FRB's CCAR 2019 qualitative assessment found that **most firms meet supervisory expectations for capital planning and several firms have addressed long-standing supervisory issues**, noting that firms newer to CCAR exhibit varying degrees of weaknesses in stress loss and revenue projections. The FRB also commented on the potential uncertainty around the effectiveness of certain large trading positions used to offset trading losses.

Figure 1: Total equity capital of US bank holding companies with \$50b+ assets (in USD billions)³



¹Year-on-year comparisons are for the 2019 population of 18 firms only.

²Only large FBO firms participating in the 2019 stress test exercise were subject to a possible qualitative objection.

³Data source: S&P Global Market Intelligence.

DFAST results in recent years have confirmed that the top banks have strong capital buffers to withstand a severe shock. Firms have moved from the post-crisis focus on capital adequacy to forward-looking capital management that is driving growth, profitability and shareholder return objectives.

Looking ahead to CCAR 2020 and beyond, investments in capital management processes and tools will be more critical than ever. Given continuing differences in cross-jurisdictional requirements, emerging capital and liquidity regulations, and

risks of a potential slowdown in growth, firms should look into reframing their capital management capabilities to one that can dynamically measure multiple competing constraints, align incentives through improved capital allocation mechanisms, and generate the right insights for more effective and efficient risk taking.

We highlight three overarching developments that we expect will impact firms' capital, growth and investment strategies in the foreseeable future and, therefore, should be on the radar of capital and risk professionals.

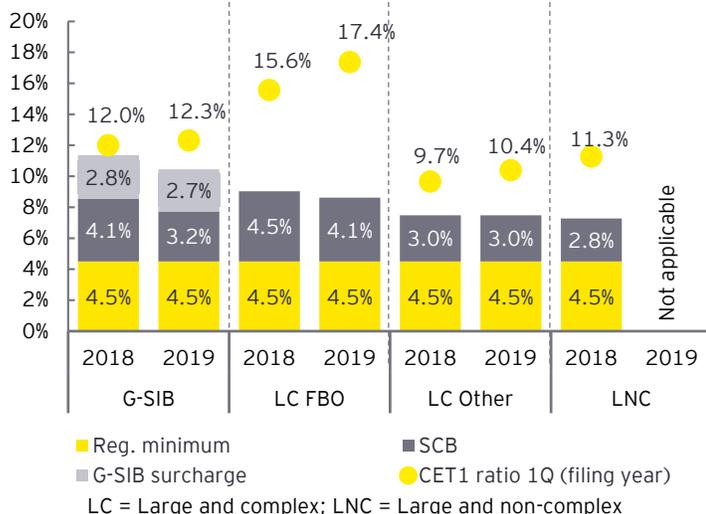
Stress capital buffer

Banks need to analyze impact and drivers of stress buffers and effect changes to their capital management framework to align business incentives

In April 2018, the FRB proposed new stress capital buffer (SCB) requirements for all banks with \$50b+ assets. The proposal integrates the forward-looking elements of the capital plan and stress-testing rule with the spot buffer requirements of the regulatory capital rule. The stressed buffer requirements are intended to be more risk-sensitive, forward-looking and firm-specific based on the results of periodic supervisory stress tests under the severely adverse scenario.

Under the proposal, banks would be required to maintain risk-based capital ratios above the regulatory minimum plus their SCB, global systematically important banks (G-SIBs) and any countercyclical buffer requirements, to avoid restrictions on capital distributions and discretionary bonus payments. Similarly, leverage ratio requirements would include a stress leverage buffer (SLB) above the regulatory minimum Tier1 leverage ratio.

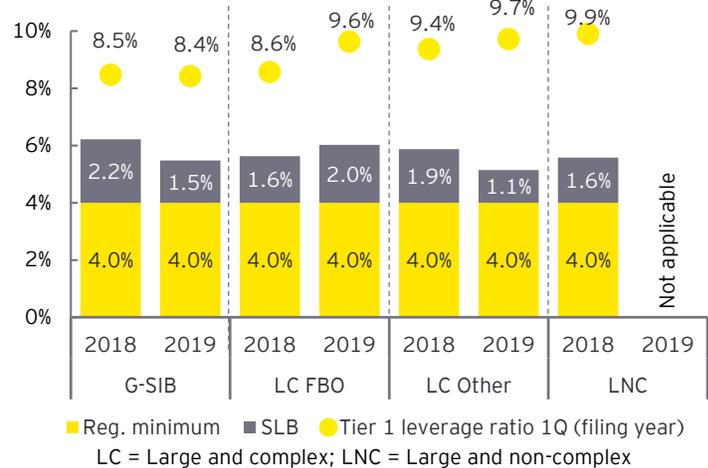
Figure 2: Average estimated SCB by firm regulatory classification⁴



Key takeaways:

- ▶ G-SIB surcharge and volatility in the potential SCB continue to be key considerations in G-SIB's capital planning despite the decrease in average pro forma SCB from 4.1% in 2018 to 3.2% in 2019.
- ▶ Estimated pro forma SCB is more stable year over year for other firms that operate, on average, with significant excess capital positions.

Figure 3: Average estimated SLB by firm regulatory classification⁴



While the proposed stress buffer requirements have not been finalized, banks need to assess the potential impact of the requirements and incorporate into capital management activities, including but not limited to the following:

- ▶ **Measure capital impact:** banks need to quantify the impact of the stress buffers to current capital requirements and identify binding capital constraints that need to be managed. Stressed risk-based capital ratios are likely to be binding for many banks, necessitating management to incorporate stress drivers in capital management.
- ▶ **Analyze buffer drivers:** banks need to gain a detailed understanding of key drivers of stress outcomes that could arise from a variety of factors including underlying risk exposures, scenario design and model configuration:
 - ▶ FRB scenario-design and associated severity could significantly vary year over year. Banks need to measure the potential volatility that this presents to stress buffer requirements. Specifically, banks could review prior stress-testing cycles and measure stress buffer requirements under historical supervisory scenarios.
 - ▶ Banks need to understand FRB model sensitivities relative to internal risk metrics to understand the potential impact of risk decisions on stress buffer requirements.
 - ▶ G-SIBs need to evaluate relative performance of their businesses given their contributions to firm size, complexity and overall systemic footprint factors that influence the G-SIB surcharge.

⁴ Estimated based on stress impact of DFAST severely adverse scenario and projected 4Q common stock dividends.

- ▶ *Adjust capital allocation approaches:* banks may need to reframe their capital allocation approaches to incorporate the differential capital consumption of businesses under stress. This will align firm and business constraints and improve risk-reward decisions.

- ▶ *Recalibrate risk appetite and limits:* banks will need to review overall risk appetite calibration and incorporate stress buffer impact and drivers in their risk management and limits framework.

Current expected credit loss

Banks need to quantify day 1 current expected credit loss (CECL) capital impact and balance methodological purity, operational complexity and reasonableness of output when projecting CECL under stress

The adoption of the CECL standard introduces new requirements that will drive substantial changes to business processes. CECL will not only impact the levels of allowance at each reporting date but also impact the levels and shape of allowance forecasts and, in turn, credit costs and capital under the CCAR and DFAST stress-testing exercises.

In December 2018, US banking regulators finalized the regulatory capital rule governing the implementation of CECL. For the 2020 and 2021 supervisory stress-testing cycles, the FRB stated that it will maintain its current framework for calculating allowance for credit losses in its supervisory stress-testing models. However, the FRB will require banks that have adopted CECL to calculate and reflect allowance for credit losses under CECL starting in the 2020 cycle.

From a capital management perspective, banks need to develop and implement their approaches to projecting CECL under stress. Considerations include, but are not limited to, the following:

- ▶ *CECL in stress framework:* banks need to design and implement the appropriate framework to incorporate CECL in their stress-testing methodologies. Implementation methodologies may increase the challenge of comparing and rationalizing any discrepancy between the supervisory and banks' estimates.
- ▶ *CECL and CCAR model convergence:* usage of CCAR models for credit losses and CECL models for provisions present heightened challenge of rationalizing any material discrepancy between two sets of modeled loss results to the firm's board of directors and senior management, as well as regulators. Many firms are working toward a unified modeling approach.
- ▶ *CECL qualitative component:* banks need to make conceptual design decisions around projecting the CECL qualitative component, which accounts for model uncertainties, limitations and the other interagency factors.
- ▶ *Model Risk Management (MRM) independent validation:* as with any other capital model, CECL stress-testing models and approaches are subject to independent validation requirements (including documentation, testing, annual review) by MRM.
- ▶ *Governance, process and controls:* banks need to determine any potential changes to process and governance structures to incorporate CECL in stress testing. Given the increased complexity of the CECL framework relative to today's allowance approaches, and the roles and responsibilities of allowance and stress-testing teams, the process and handoffs of the results (e.g., sign-offs, controls, documentation) may need to be redefined.

- ▶ *CECL forecast sensitivity to assumptions:* allowance build and provision forecasts are sensitive to various assumptions and methodology decisions, eventually impacting projected capital ratios over the capital planning horizon. One decision is whether to adopt an assumption of perfect foresight, where the exact unfolding of the scenario is known at the beginning of the forecast period. Under this assumption, the allowance builds to a maximum level in projection quarter 1 and is slowly released throughout the horizon.

Alternatively, and perhaps closer to the way a severely adverse scenario would actually unfold, the projected scenario paths reflect only the information available to the firm in each quarter. Under this "uncertain foresight" approach, firms would regenerate an updated view of the scenario for each point in the forecast horizon, and the allowance would likely build and release more gradually.

While institutions recognize that assumptions under perfect foresight are less realistic, it is a simpler and more transparent approach, and there is continued discussion on the pros and cons under each of the above options.

Figures 4 and 5 depict the reserve build using perfect/uncertain foresight assumptions for an illustrative \$1b commercial and industrial portfolio with a five-year maturity and an eight-quarter reasonable and supportable period.

Figure 4: CECL allowance build: perfect foresight (in USD millions)

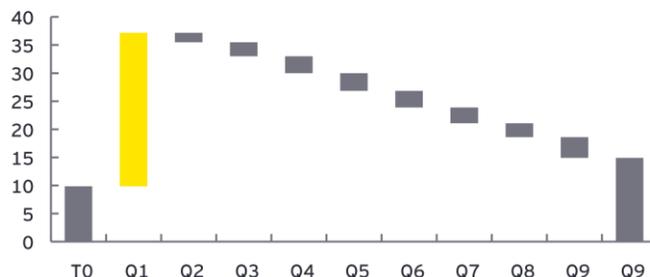
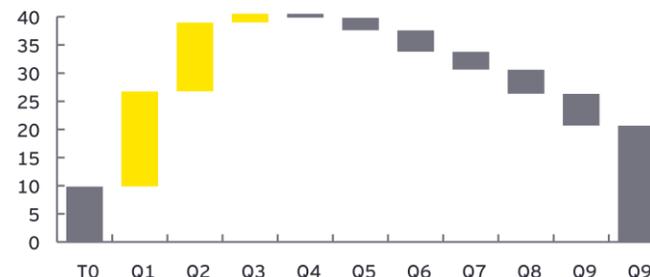


Figure 5: CECL allowance build: uncertain foresight (in USD millions)



Fundamental review of the trading book

Banks need to consider various optimization levers to minimize adverse capital and operational impacts of fundamental review of the trading book (FRTB)

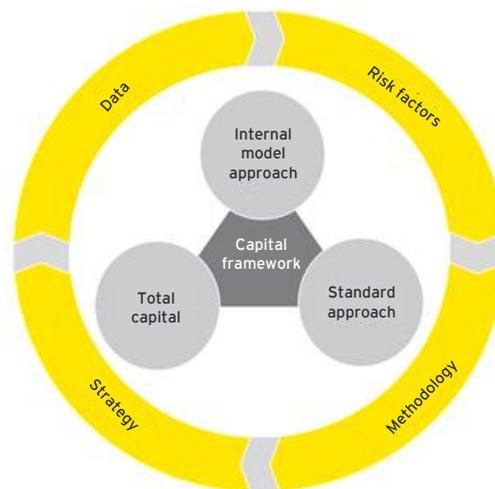
The FRTB overhauls the market risk capital framework to address shortcomings of the current Basel 2.5 market risk capital framework. Given that the framework's complexity and the scale of change required to comply with the new requirements are significant, banks should analyze the major drivers of capital and prioritize implementation activities that optimize capital within the constraints of FRTB.

Four important optimization levers to minimize the potential adverse capital and operational impacts of FRTB include:

- ▶ **Data:** poor data quality and data misalignments across the bank may lead to higher capital charges due to inability by the bank to use the Internal Model Approach (IMA) caused by Profit and Loss Attribution (PLA) Test and Risk Factor Eligibility Test (RFET) failures. As such, banks should consider building single source data repositories, aligning/cleansing data, and extending data history to enhance their ability to use IMA, improve calculation accuracy, and decrease the need for computationally heavy FRTB re-runs.
- ▶ **Risk factors:** assess the optimal risk factor granularity, bucketing and coverage to confirm maximum PLA and RFET pass rates. Firms can look to maximize the risk factor coverage in capital models focusing on the most material missing risk factors, such as correlation, basis and equity dividend yield risk.
- ▶ **Methodology:** review and update the modeling methodology, scope, assumptions and limitations to optimize capital impacts. We have observed that full revaluation of risk may better align Front Office and Risk P&L methodology which could help reduce PLA failures. Further, assess risk factor to instrument mapping methodology, stressed period window and liquidity horizon elections to optimize the non-modelable risk factors (NMRF) charge.

- ▶ **Strategy:** consider changes to the business operating model, desk structure and trading behavior to optimize PLA and RFET pass rates. Explore re-allocation of trades between desks and segregation of trades unlikely to pass eligibility. Evaluate the optimal number of trading desks to reduce the overall operational impact of FRTB. Review trading book/banking book boundary including systems and internal hedging strategies to optimize internal risk transfer recognition and avoid broken hedges. Early identification of risks in both trading and banking book may help to avoid surprisingly high capital charges.

Banks should analyze the capital driver impact of each lever against the FRTB capital calculation components and capital framework constraints and prioritize their implementation activities to facilitate effective and optimal compliance of the rules. This analysis should be an iterative process in which the levers will be assessed against any changes in the banks' internal conditions such as revisions to desk structure, IMA desk eligibility and new trading activity.



In conclusion

Since 2009, firms have been investing in processes, people and tools to establish and enhance sophisticated capabilities for capital planning and stress testing. CCAR results for this year reflect more mature capital management practices, including the successful build-up of capital buffers and requisite stress-based capital to withstand a hypothetical crisis. As such, many firms continue to review their capabilities to achieve increased process efficiency and improved controls that enable sustainable and repeatable capital planning and stress-testing processes. One of the key objectives is how to leverage these capabilities to support not only capital stress testing but also integrate with financial planning, liquidity stress testing, and business as usual risk management.

Notwithstanding a more stable set of regulatory requirements for capital planning and stress testing over the past few years, banks are operating in an environment of continued uncertainty

around the financial and operational impact of potential forthcoming capital regulations as discussed in this alert (e.g., CECL, SCB, FRTB).

In the context of these potential future developments, there remains room for further analysis and application of levers to optimize capital in support of growth and shareholder return objectives. Capital management capabilities need to be responsive to multiple competing financial and risk appetite objectives and constraints, incentives should be aligned improved capital allocation mechanisms, and capital considerations should drive insights for more effective and efficient business planning and risk management decisions. Firms with the most embedded, forward-looking capabilities will be the best-positioned to navigate through the evolving capital management landscape.

Notes:

Bank categories used in Figure 2 and Figure 3:

- ▶ **G-SIBs:** Bank of America Corporation; The Bank of New York Mellon Corporation; Citigroup Inc.; The Goldman Sachs Group, Inc.; JPMorgan Chase & Co.; Morgan Stanley; State Street Corporation; Wells Fargo & Company
- ▶ **Large and complex – FBOs:** Barclays US LLC; Credit Suisse Holdings (USA), Inc.; HSBC North America Holdings Inc.; RBC USA Holdco Corporation⁶; TD Group US Holdings LLC; DB USA Corporation; UBS Americas Holding LLC
- ▶ **Large and complex – others:** Capital One Financial Corporation; Northern Trust Corporation⁵; The PNC Financial Services Group, Inc.; U.S. Bancorp
- ▶ **Large and non-complex⁶:** Ally Financial Inc.; American Express Company; BB&T Corporation; BBVA Compass Bancshares, Inc.; BMO Financial Corp.; BNP Paribas USA, Inc.; Citizens Financial Group, Inc.; Discover Financial Services; Fifth Third Bancorp; Huntington Bancshares Incorporated; KeyCorp; M&T Bank Corporation; MUFG Americas Holdings Corporation; Northern Trust Corporation⁵; Regions Financial Corporation; Santander Holdings USA, Inc.; SunTrust Banks, Inc.

⁵ Classified as "large and non-complex" in 2018 and "large and complex" in 2019.

⁶ Not subject to a supervisory stress test in 2019 cycle.

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Score no. 06511-191US_2

1906-3201737
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