



Positive Results But Challenges Remain for CCAR Banks

This is the first year that all of the capital plans from the 34 largest financial institutions in the United States have passed the Federal Reserve’s 2017 Comprehensive Capital Analysis and Review (CCAR) stress tests.¹ This is also the first year that 13 of the 34 banks were assessed from both a quantitative and qualitative perspective.² Although one bank’s CCAR plan was conditionally passed on the understanding that a new capital plan would be resubmitted within six months that addresses weaknesses in the firm’s capital planning practices, the results have enabled some banks to offer enhanced dividend payments to shareholders.³

While the industry has progressed since the stress tests were first implemented in 2009, global banks remain exposed to geopolitical risk, cyberrisk and emerging risk from financial technology companies. This paper analyzes the CCAR results and sets out the challenges and areas requiring improvement to ensure banks are fully prepared for a stressed scenario within the evolving financial marketplace.

Previously, regulators observations of firms’ capital plans were largely qualitative due to perceived weaknesses in their capital planning processes, more recently regulators’ comments have been geared towards deficiencies in the risk management framework that impacts the reliability of the capital adequacy. These include: risk identification, measurement and monitoring functions, stress testing processes, internal controls as well as governance and oversight functions.

¹ The 34 banks assessed in CCAR are: Ally Financial; American Express; BancWest; Bank of America; Bank of New York Mellon; BB&T; BBVA Compass Bancshares; BMO Financial; Capital One; CIT Group; Citigroup; Citizens Financial Group; Comerica; Deutsche Bank Trust; Discover Financial Services; Fifth Third Bancorp; Goldman Sachs; HSBC North America; Huntington Bancshares; JPMorgan Chase; KeyCorp; M&T Bank; Morgan Stanley; MUFG Americas; Northern Trust; PNC Financial; Regions Financial; Santander Holdings USA; State Street; SunTrust; TD Group; U.S. Bancorp; Wells Fargo; and Zions Bancorporation.

² The 13 firms are: Bank of America; Bank of New York Mellon; Capital One; Citigroup; Goldman Sachs; HSBC North America; JPMorgan Chase; Morgan Stanley; PNC Financial Services; State Street; TD Group; U.S. Bancorp; and Wells Fargo.

³ “JPMorgan, BofA, Citi, Wells Fargo Hike Payouts, OK Massive Buybacks,” Investor’s Business News Daily: www.investors.com/news/this-dow-stock-is-nearing-a-buy-point-ahead-of-bank-stress-test-no-2/.

Capital Levels Increase

U.S. firms have substantially increased their capital since the first round of stress tests led by the Federal Reserve in 2009.

This is reflected in the common equity capital ratio — which compares high-quality capital to risk-weighted assets — of the 34 bank holding companies in the 2017 CCAR, which has more than doubled from 5.5 percent in the first quarter of 2009 to 12.5 percent in the first quarter of 2017. This shows an increase of more than \$750 billion in common equity capital to a total of \$1.25 trillion during the same period.

In 2017, the 34 banks have estimated that their common equity will remain near current levels between the third quarter of 2017 and the second quarter of 2018, based on their planned capital actions and net income projections.

In the supervisory post-stress capital assessment, the Federal Reserve estimates that the aggregate common equity tier 1 ratio for the firms participating in CCAR 2017 would decline in the severely adverse scenario from 12.5 percent in the fourth quarter of 2016 (the starting point for the exercise) to 7.2 percent at its minimum point over the planning horizon.

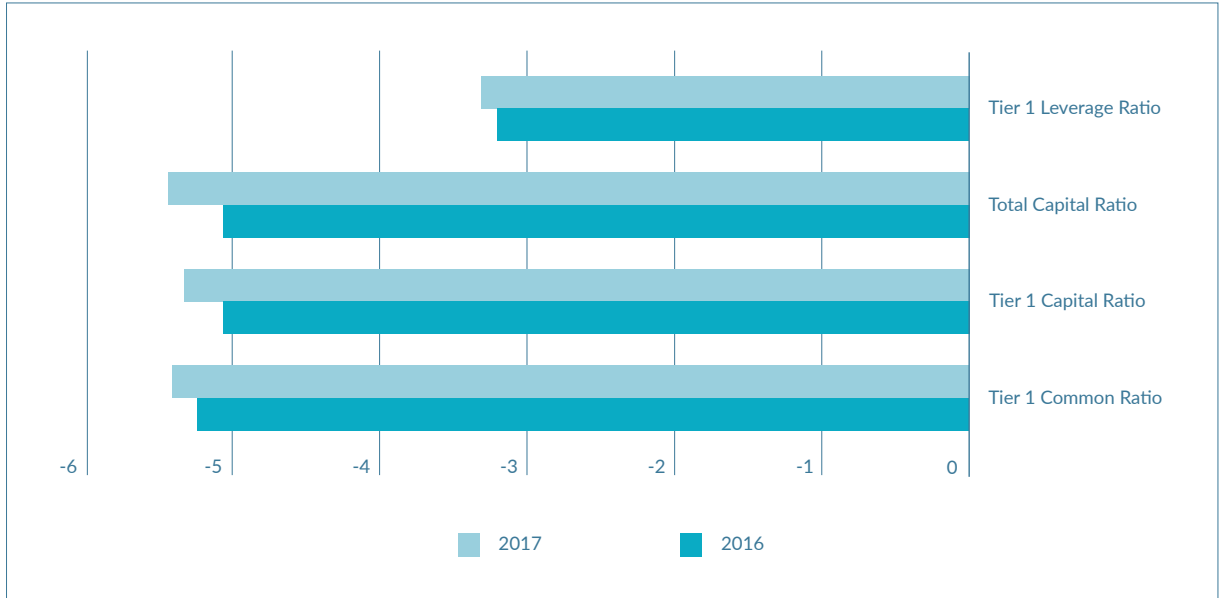
This post-stress common equity tier 1 ratio is 1.7 percentage points higher than the firms' aggregate common equity tier 1 ratio in the first quarter of 2009.

The following charts provide a 2016 to 2017 comparison of stress impact on actual starting capital ratios for the severely adverse scenario. The difference between the year-end actual and the projected minimum is the stress impact. Therefore, it appears that the banks are able to maintain the capital buffer over regulatory requirements over the nine quarter forecast horizon for 2017, with some banks improving their capital positions in comparison to 2016.⁴



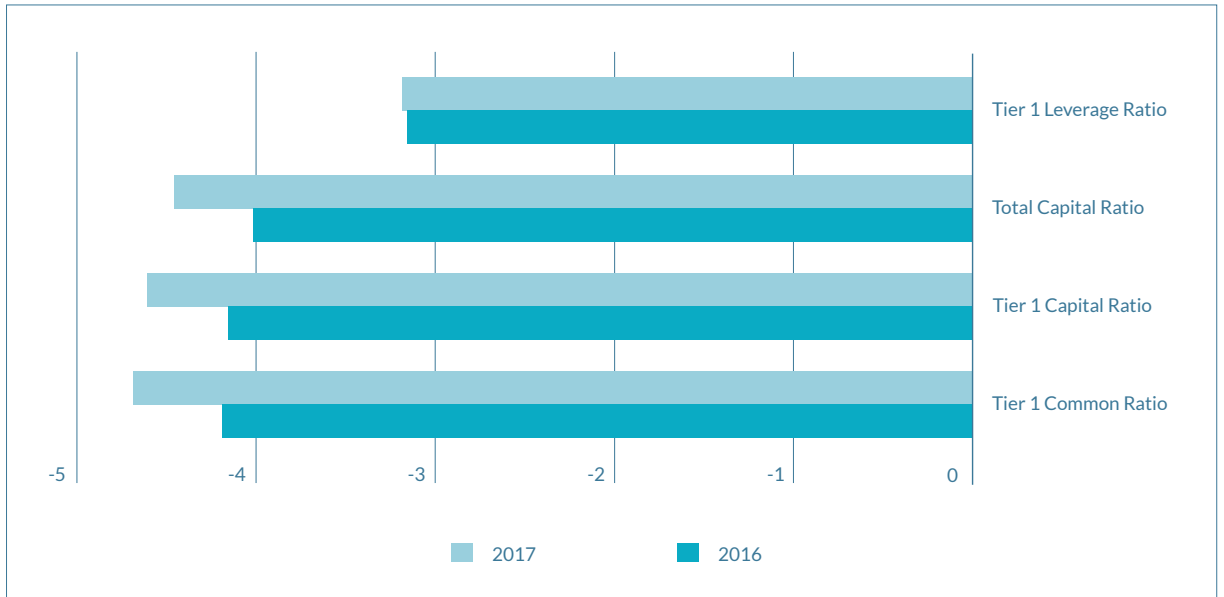
⁴ The data was obtained from Federal Reserve's Comprehensive Capital Analysis and Review 2017: Assessment Framework and Results: www.federalreserve.gov/publications/files/2017-ccar-assessment-framework-results-20170628.pdf.

- • • **Complex Banks Severely Adverse Capital Ratio Average Stress Impact: 2016 vs 2017 comparison⁵**



Source: SNL Financial; Federal Reserve

- • • **Non Complex Banks Severely Adverse Capital Ratio Average Stress Impact: 2016 vs 2017 comparison⁶**

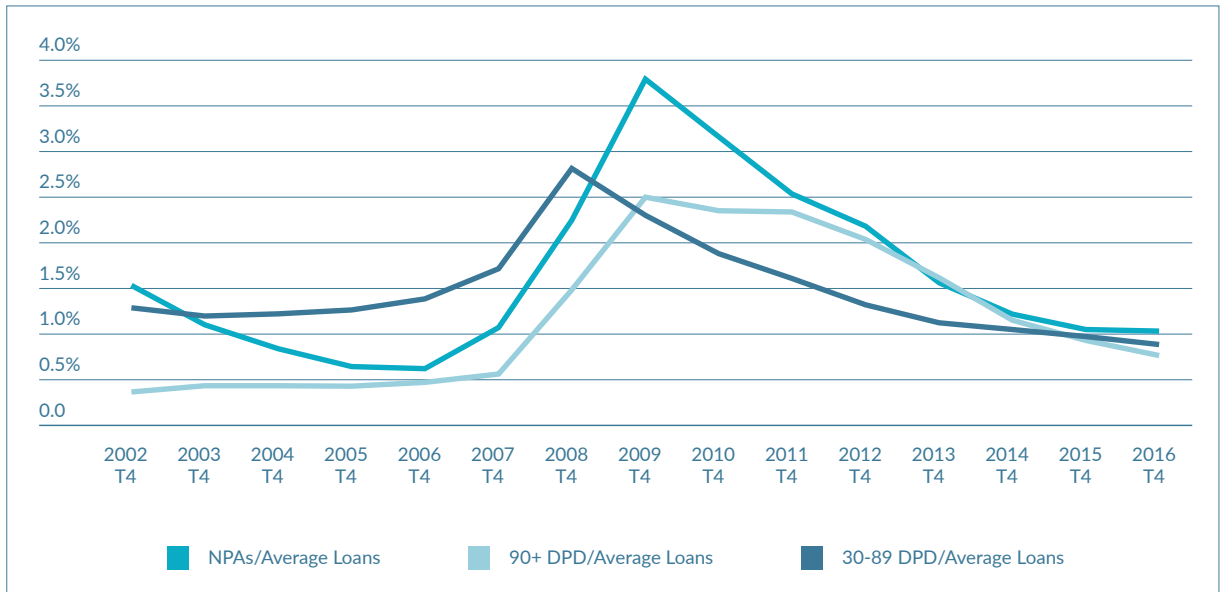


Source: SNL Financial; Federal Reserve

⁵ Banks defined as complex in the 2017 stress tests are: Bank of America; Bank of New York Mellon; Capital One; Citigroup; Goldman Sachs; HSBC North America; JPMorgan Chase; Morgan Stanley; PNC Financial; TD Group; U.S. Bancorp; and Wells Fargo.

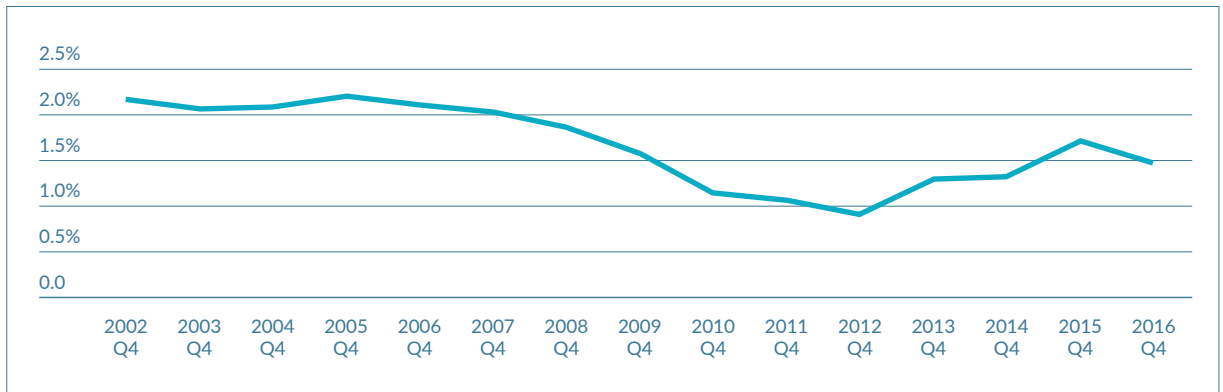
⁶ Banks defined as non-complex in the 2017 stress tests are: Ally Financial; American Express; BancWest; BB&T; BBVA Compass Bancshares; BMO Financial; Capital One; CIT Group; Citizens Financial Group; Comerica; Discover Financial Services; Fifth Third Bancorp; Huntington Bancshares; KeyCorp; M&T; MUFG Americas; Northern Trust; Regions Financial; Santander Holdings USA; SunTrust; and Zions Bancorporation.

- • • **Credit Risk**



Source: SNL Financial

- • • **Aggregate: RWA/Total Assets**



Source: SNL Financial

Changes in Stress

Risk sensitivities can be measured by the level of shock/decline in capital from actuals-to-trough (the lowest point of capital). Comparing last year to this year it appears that there is a slight increase in the rate that capital ratios declined. This change can be attributed to many factors (or a combination of factors) including differences in the starting point for firms’ balance sheets — i.e. the participants got riskier — or to changes to forecast methodologies, changes to the forecasting data, conservatism in the forecast, or changes to the Federal Reserve’s methodology.

In order to provide a simple test if balance sheets got riskier, we created a ratio using the sum of all risk-weighted assets to total assets for this year’s participants. Historical data was pulled for the current year participants and looked back through time. This metric was selected to gain a high-level view of whether balance sheets were becoming more or less risky, and what level of discounts were being applied to assets given their balance sheet categorization/awarded relative risk.

Overall, balance sheet risk has decreased since the peak of the global financial recession, but it has risen from the trough as financial institutions flushed out bad assets originated in the early 2000's and have begun to take on more risk the last few years. Compared to last year, however, this ratio has decreased, suggesting a slight reduction in balance sheet risk for this year's participants.

Similarly, by examining total loan past dues statistics for all the CCAR participants (in aggregate), to understand if the status and migration of past dues could indicate future loan charge-offs, overall, credit risk appears to be flat to down compared to last year's CCAR starting point.

These two views suggest that overall balance sheet risk or delinquencies, at least in isolation, may not be driving the slight increase in actuals-to-trough shocks reported in this year's results.

Areas of Weakness Remain

In addition to the quantitative assessment, the Federal Reserve also reviewed the strength of each firm's capital planning practices to ensure they have sound practices and analyses for determining their capital needs on a forward-looking basis.

The Federal Reserve observes that most of the 13 firms participating in the CCAR 2017 qualitative assessment have continued to strengthen their capital planning practices since last year. Improvements were observed in estimation methods used to conduct stress tests and the risk measurement and management, internal controls and governance supporting the firms' capital planning processes. However, the supervisor suggests that some firms continue to have areas of weaknesses that fall short of meeting supervisory expectations for capital planning. Areas highlighted for improvement include:

- Identification of risks associated with firms' products and services that may materialize under stressed conditions, particularly risks stemming from the introduction of new products or changes in underwriting standards
- Use of loss estimation approaches that may be appropriate to use under expected conditions but are not suitable for stress testing, as they may materially underestimate losses in stressful conditions when the relationships between risk drivers and losses diverge from the relationships under expected conditions
- Controls around data accuracy, model risk management, and internal audit, which are foundational areas of capital planning.

The Federal Reserve has allowed time for firms to work toward full achievement of its capital planning expectations and as such, expects firms to continue to make "steady progress."

Continuing Challenges

Since the inception of CCAR requirements, financial institutions have implemented and enhanced their stress testing and capital planning processes. To further assist financial institutions' efforts to improve their processes, in its latest review, the Federal Reserve provided some insights on the six qualitative areas of focus when assessing a bank's capital planning process: governance, risk management, internal controls, capital policies, scenario design and projection methodologies.

Due to the broad and technical nature of CCAR, many banks are striving to find an effective and efficient way to comply with the regulatory requirements. Below are some of the main challenges facing CCAR banks, which relate to the six qualitative areas singled out by the regulators following this year's tests.

Data Quality and Integrity

The availability and reliability of key data for firms' CCAR assessment process is inconsistent or often requires heroics in compiling it for each period. Given the intensity and compressed timing of the CCAR cycle, banks continue to face the challenge of ensuring the quality and integrity of the data used for submission. Banks also need to consider data limitations. They need to continue to evaluate and assess the use of estimation approaches that may be appropriate for use under expected conditions but which are not suitable for stress testing.

Internal Controls

Regulators have increased expectations for firms to establish a robust internal control framework. As the CCAR process matures, the first line of defense is expected to own, update, acknowledge and certify their internal controls, while the second line of defense is expected to validate significant controls. However, many banks continue to face challenges in remediating gaps in controls in a timely manner.

People

There are countless teams and stakeholders involved in the CCAR submission within the financial institution but there are often few individuals that truly understand the requirements. Banks are still in the process of fine tuning sets of instructions or installing a common language that can be communicated across different business units and functions to achieve consistency in documenting non-model estimations, narratives, model documentation and scenario designs. Such large teams and tight deadlines create timing issues, where often the second line functions are working concurrently with third line reviews.

Governance and Transparency

Companies struggle to ensure transparency of the process at the board of director level. Board members must have an understanding of any gaps and limitations in their capital plans prior to approval. Senior management must ensure transparency and involve the board early in the CCAR cycle to inform them of the identified risks associated with firms' products and services that may materialize under stressed conditions.

Internal Audit

The Federal Reserve has deepened its focus on the internal audit function. The audit function is faced with the difficult task of auditing in real time, which is concurrent with the business executing CCAR processes leading to submission. Internal audit is also tasked with a balancing act of ensuring the function is sufficiently resourced internally with individuals with subject

matter expertise in a variety of areas, including bank products, stress testing, forecasting and modeling, as well as ensuring they have a strong audit background to be able to appropriately assess and test internal controls.

The Future of Stress Tests

Future stress tests are predicted to become more transparent and less complex if the U.S. Congress passes new legislation currently under debate that will repeal or amend much of the regulation brought into force by the Dodd-Frank Act. The latest iteration from the U.S. Treasury recommends lowering the threshold for the application of the Comprehensive Capital Analysis and Review (CCAR) to be more in line with the complexity of the bank holding companies, while well-capitalized institutions with a 10 percent non-risk-weighted leverage ratio could even be eligible for exemption from CCAR, Dodd-Frank's enhanced prudential standards and the Volcker Rule.⁷

Financial institutions have expended time and resources enhancing process automation and staffing to support their stress testing activities. Accordingly, internal routines and controls, internal audit's coverage framework and other quality assurance activities have also materially expanded. However, enhancements still appear warranted related to assumption/methodology documentation, model/EUC controls, management and/or regulatory reporting controls. Many of the new controls that have been added include numerical edit checks, however often conceptual/logic checks could capture process or results issues that a mechanical edit check might not flag.

There has been some movement toward the removal of qualitative objections in the CCAR assessment process but, given the level of commentary provided in the Federal Reserve's report, which highlights a stronger focus on qualitative importance of capital planning, firms should be prepared for the regulator to have a heavier emphasis on the qualitative factors in its assessment during the 2018 CCAR cycle.

⁷ See Protiviti Flash Report, U.S. Treasury Report Proposes Changes to the Financial Regulatory System: www.protiviti.com/US-en/insights/us-treasury-report-proposes-changes-financial-regulatory-system.

CFO Attestation Enhancement

Systemic and complex banks should also consider implementation or further integration and enhancement of the CCAR chief financial officer (CFO) attestation final rule into the overall CCAR program to compensate for the short falls noted in the Federal Reserve 2017 CCAR results. Firms should be mindful of potential additional guidance for banks to broaden the scope of their CCAR CFO attestation program.

Capital Improves; Risk Remains

As stated previously, capital ratios have continued to improve over the last few years but one of the forefront considerations for the industry is how to improve earnings. Over the last decade, banks have had to endure credit and market losses, a relatively flat/low yield curve, and regulatory costs. Much of this has been managed through reduced operating expenses and/or headcount. Balance sheet risk/reward balancing will

continue to be an area management teams consider to drive earnings improvement, while maintaining capital adequacy.

As banks are exposed to increasing political risk both at home and around the world, while coping with a rapidly changing marketplace as fintech products challenge traditional players and introduce new risks into the system. Equally, fintech, or more specifically regulatory technology (regtech), is introducing new technologies to assist with the management of risk by improving efficiencies and data quality, all of which feeds into the stress testing process. Rather than expect the burden to ease given recent political posturing on the Dodd-Frank Act amendments, firms should be prepared for regulatory and shareholder demands for greater transparency, a heightened focus on the clarity of firms' risk appetite as well as an emphasis on accountability.

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