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CCAR and DFAST

Reaching the summit

July 2017

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The Federal Reserve (Fed) released the results of its 2017 Comprehensive Capital Analysis and Review (CCAR) on June 28. Some key facts:

- For the first time in CCAR's seven-year history, the Fed did not object to any of the capital plans or capital distributions.
- One firm, Capital One, was required to resubmit its capital plan to address certain capital planning process weaknesses.
- The aggregate quantitative results were very similar to the 2016 CCAR program, with all 34 firms exceeding required minimums.
- Two firms, American Express and Capital One, adjusted their original requested capital distributions taking advantage of a so called "mulligan" to fine tune their capital levels.

The prior week's release of the Dodd-Frank Act Stress Test (DFAST) results provided more detailed information on the Fed's stress test. Compared to CCAR, those results exclude buybacks and capital issuances and hold past common dividends constant.

Some key takeaways

- **CCAR firms appear to have reached the summit of capital planning and stress testing.** With no objections this year and just one firm requiring resubmission, it appears the industry's multi-year investment in capital planning and stress testing has paid off.

- **Short falls in expectations still remain.** For the systemic and complex firms[1] that are subject to the qualitative portion of the Fed's CCAR reviews, the Fed noted that some firms continue to fall short in the following areas:
  - Risk identification
  - Weaknesses in stress loss estimation for models geared toward expected conditions
  - Controls for data accuracy
  - Model risk management
  - Internal audit

- **Capital actions continue to matter.** As in previous years, the requested capital actions have a material influence on minimum post-stress ratios for most firms and were significantly higher than the prior year. Requested capital actions trimmed the aggregate common equity tier 1 ratio by 2.0 percentage points compared to DFAST.

- **Most firms exceed post-stress minimums by a comfortable margin.** For each traditional capital measure, more than 30 firms exceeded the minimum requirement under stress by 1.0 percentage point or more. For the new supplementary leverage ratio[2], 11 of the 15 firms required to calculate the measure exceeded the minimum under stress by 1.0 percentage point or more. Two firms, Goldman Sachs and Morgan Stanley, were within 0.2 percentage points of the minimum requirement under stress.

- **Greater transparency for the CCAR process.** A new section of the CCAR results provided a more thorough discussion of the qualitative framework and process, a commitment the Fed had made to improve transparency—in part—based on recommendations of a report from the Government Accountability Office (GAO). This section also provided examples of historical deficiencies for governance, risk management, internal controls, capital policies, scenario design, and projection methodologies.

[1]Board of Governors of the Federal Reserve System, "Federal Reserve releases results of Comprehensive Capital Analysis and Review (CCAR)," (June 29, 2016), available at http://www.federalreserve.gov/newsevents/press/bcreg/20160629a.htm.

[2]Systemic and Complex firms in this document refers to (1) those firms subject to the Federal Reserve's Large Institution Supervision Coordination Committee (LISCC) framework and (2) large and complex bank holding companies (BHCs) and intermediate holding companies (IHCs) of foreign banking organizations that have total assets greater than $250 billion or total on-balance sheet foreign exposure of more than $10 billion. Large and noncomplex firms are US BHCs and IHCs that are not part of the LISCC framework, have assets of between $50 billion and $250 billion, and have total on-balance sheet foreign exposure of less than $10 billion.

Summary of CCAR results for severely adverse scenario

Aggregate results and buffers over minimums

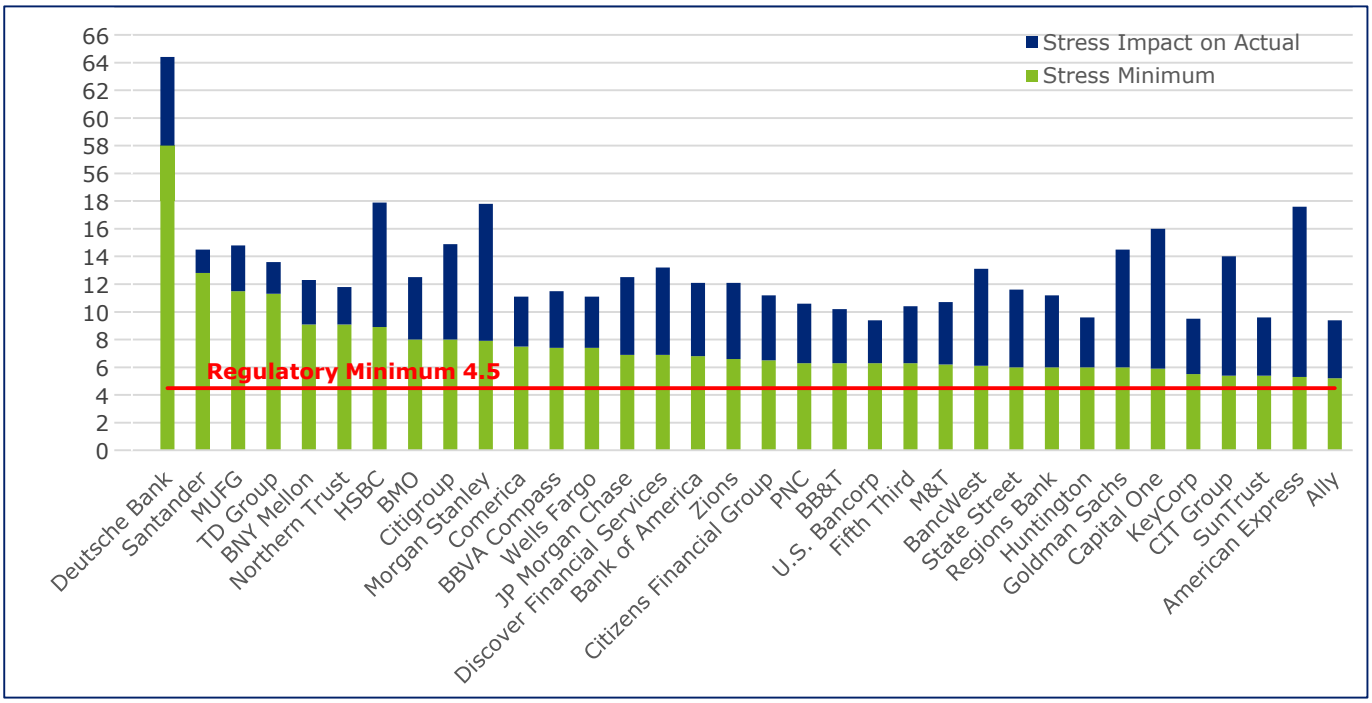
In aggregate, stress minimums were well above minimum regulatory requirements as shown below.

CCAR Severely Adverse 2017		Category			
		Actual Q4 2016	**Stress Minimum**	**Minimum Required**	**Buffer Over Minimum**
Ratio (%)	Common equity tier 1 ratio	12.5	7.2	4.5	2.7
	Tier 1 capital ratio	13.9	8.7	6.0	2.7
	Total risk-based capital ratio	16.5	11.3	8.0	3.3
	Tier 1 leverage ratio	9.2	5.7	4.0	1.7
	Supplementary leverage ratio	N/A	4.4	3.0	1.4

Source: Deloitte analysis of Comprehensive Capital Analysis and Review 2017: Assessment and framework and results

The size of buffers over minimum requirements varied widely across banks, as illustrated below and on the next page for the common equity Tier 1 capital ratio and leverage ratios. The results are sorted in descending stress minimum ratio order. The dark blue portion of the bar indicates the degree of stress impact on the actual starting capital ratio.

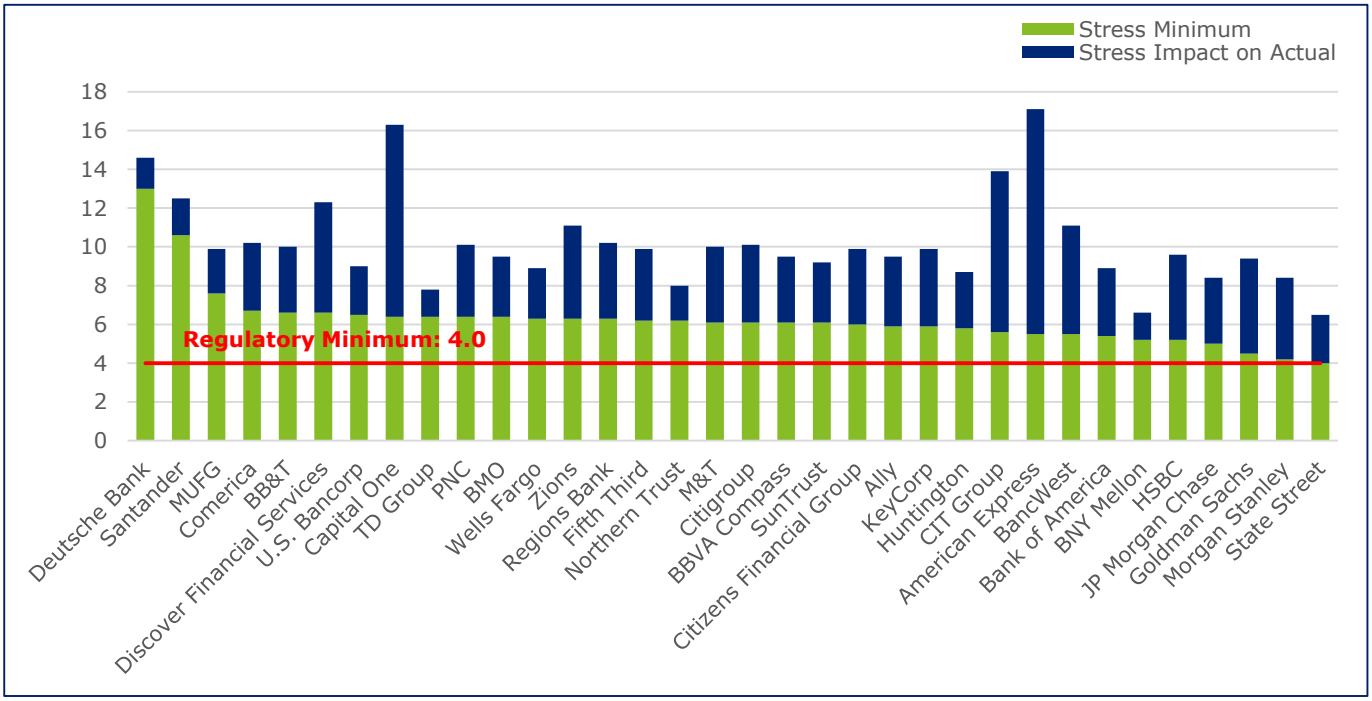
Stress impact on starting actual capital ratios
Severely adverse scenario - Common equity Tier 1 capital ratio (2017)



Source: Deloitte analysis of 2017 Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results

Leverage ratio stress impacts and buffers over minimum requirements also varied widely by banking organization.

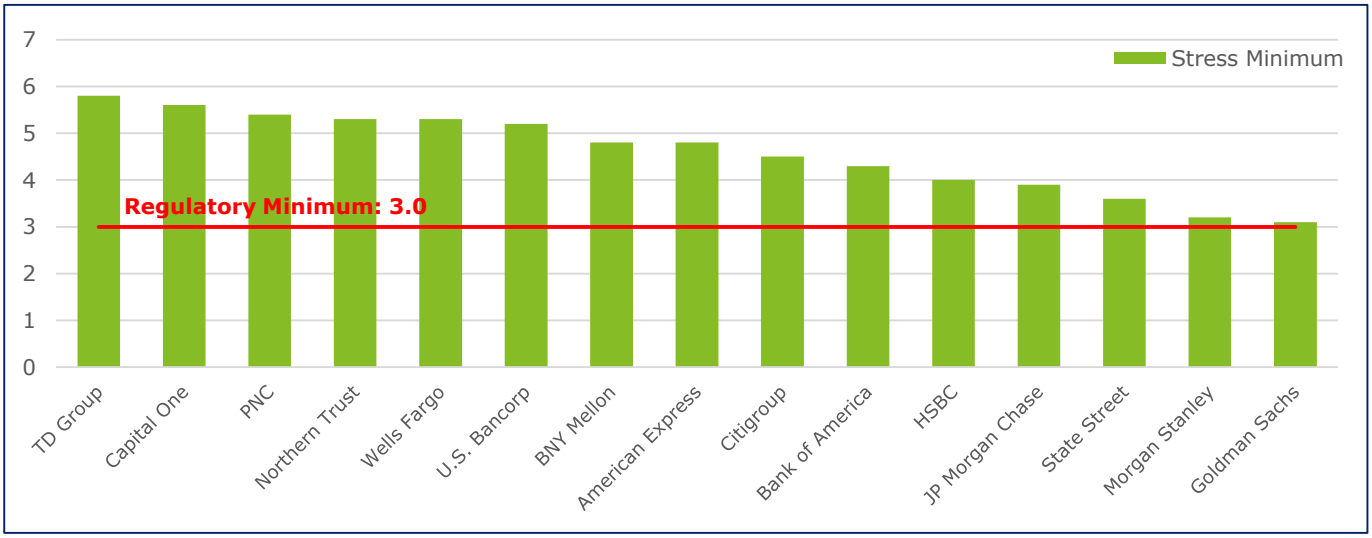
Stress impact on starting actual capital ratios
Severely adverse scenario - Tier 1 leverage ratio (2017)



Source: Deloitte analysis of 2017 Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results

Similarly, headroom over the supplementary leverage ratio2 was wide ranging as well for those advance approaches firms required to meet the new standard beginning in 2018.

Stress impact on starting actual capital ratios
Severely adverse scenario – Supplementary leverage ratio (2017)

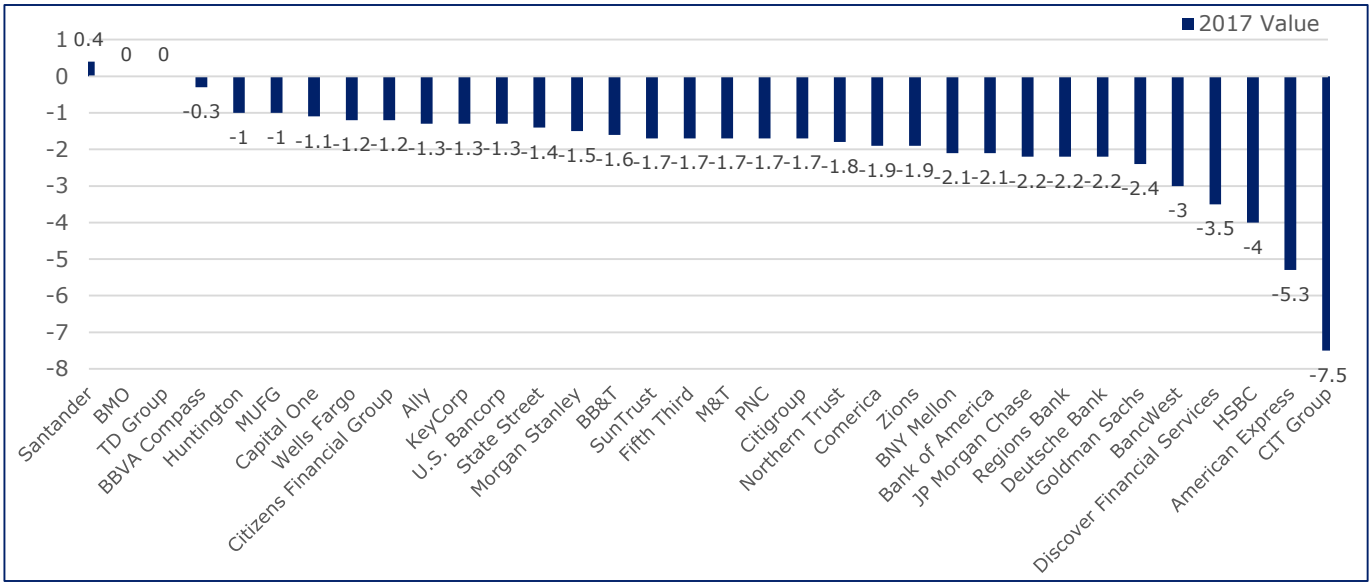


Source: Deloitte analysis of 2017 Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results

Capital actions matter

The Fed's stress tests include the conservative assumption that historical or requested capital distributions under normal conditions will also continue during stress. While DFAST incorporates the assumption that dividends will be maintained at the same rate as in the prior four quarters, CCAR results include firm requests for dividend increases and stock buy backs. Consequently, stress capital ratios can be lower in the CCAR results due to these potentially higher capital distribution levels. In aggregate, the effect on common equity Tier 1 of requested capital actions was a reduction in the minimum ratio of 2.0 percentage points, compared to 1.3 percentage points for 2016 and 1.0 percentage point in 2015. The amount of capital action impact varied widely across firms, with 30 firms trimming their capital by 1.0 percentage point or more.

Implied capital action effect on capital ratio
CCAR stress minimum relative to DFAST stress minimum
Common equity tier 1 capital ratio



Source: Deloitte analysis of 2017 Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results

More aggressive capital distributions resulted in a plateau in post-stress minimum ratios, with each measure within 0.2 percentage points of the prior years' minimums.

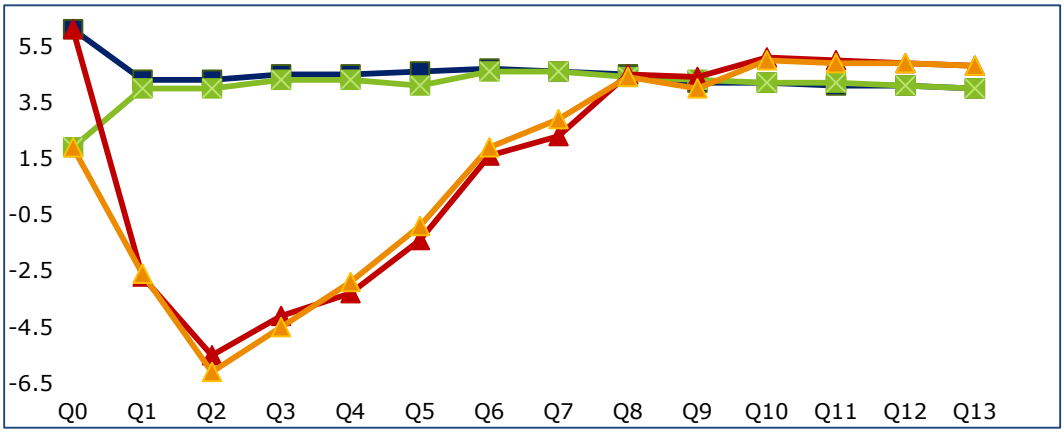
BHC Aggregate		Ratio (%)				
		2014	**2015**	**2016**	**2017**	**Change 2017 - 2016**
Ratio	Common equity tier 1 ratio	6.9	6.6	7.1	7.2	0.1
	Tier 1 capital ratio	7.8	7.7	8.6	8.7	0.1
	Total risk-based capital ratio	10.4	10.3	11.4	11.3	(0.1)
	Tier 1 leverage ratio	5.4	5.3	5.9	5.7	(0.2)
	Supplementary leverage ratio	N/A	N/A	N/A	4.4	N/A

Source: Deloitte analysis of 2017 Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results

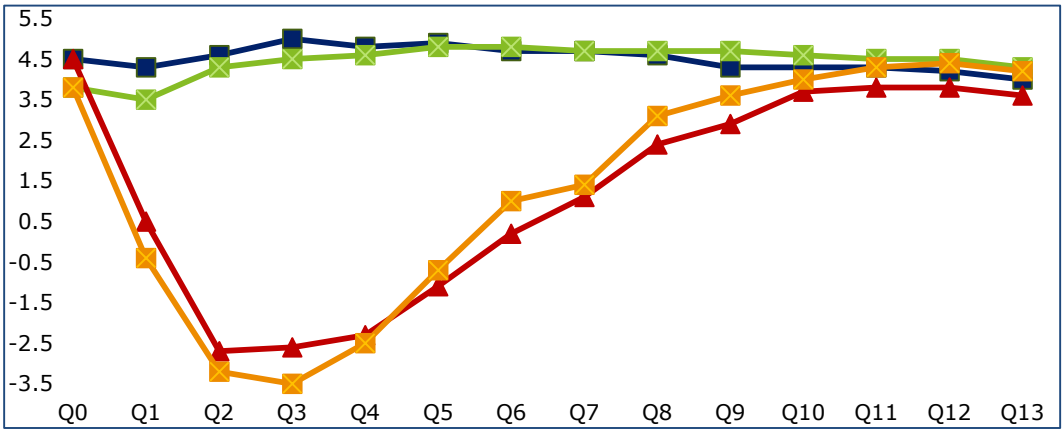
Key drivers of 2017 DFAST and CCAR results for the severely adverse scenario

A slightly tougher severely adverse scenario. Progress in the economy since last year led to an improved jumping off point for the scenarios, but relatively greater stress is assumed than last year in US gross domestic product (GDP), unemployment, and commercial real estate prices offsetting much of those gains. Credit spreads under severely adverse conditions are much higher than last year for mortgages, commercial real estate, and prime loans. Internationally, there are relatively more severe recessions assumed for Japan, U.K, and the Euro area, but less severe in developing Asia. On the positive side, interest rates do not go negative this year and are at generally higher levels that may have contributed to improvements in pre-provision net revenue (PPNR).

Nominal GDP growth (%)



Nominal disposable income growth (%)



2017 Baseline

2016 Baseline

2017 Severely Adverse

2016 Severely Adverse

Source:
2016 Supervisory Scenarios for Annual Stress Tests: http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20160128a2.pdf
2017 Supervisory Scenarios for Annual Stress Tests: https://www.federalreserve.gov/newsevents/press/bcreg/bcreg20170203a5.pdf

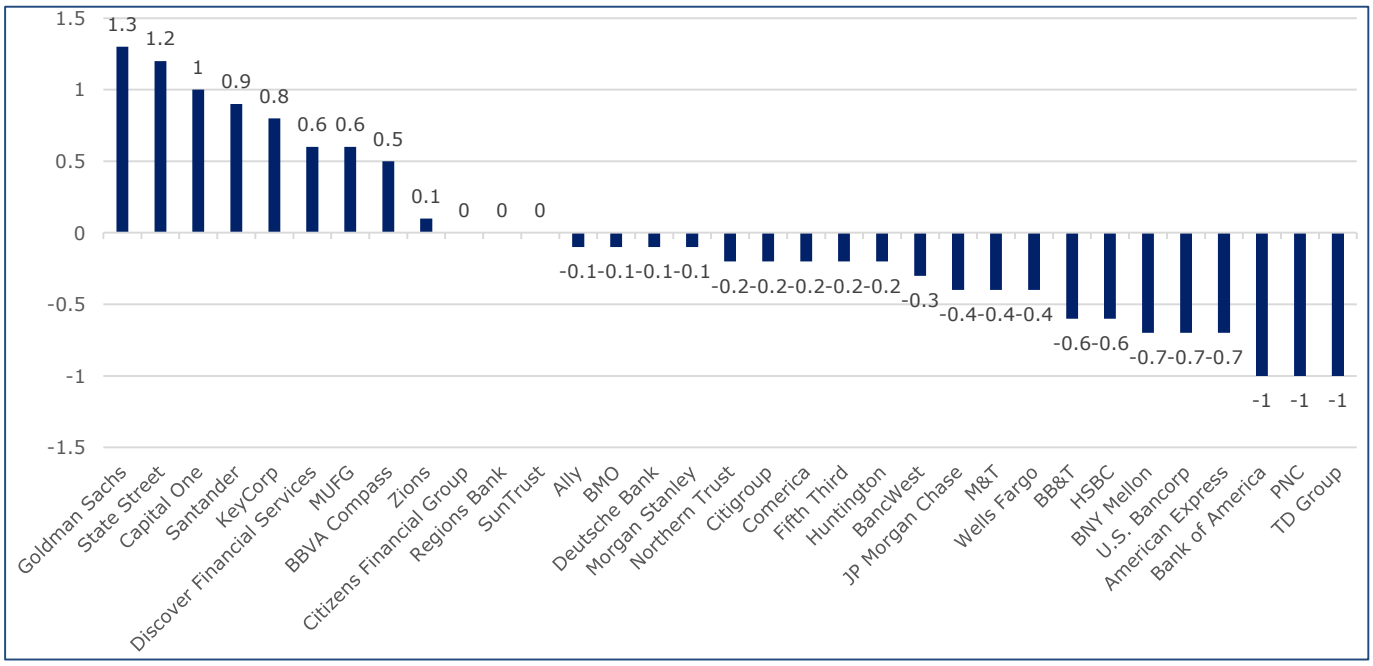
Loan loss rates improve. Despite a somewhat tougher scenario this year, loan loss rates improved in aggregate by 0.3 percentage points as shown in the chart below. Results across portfolios were mixed however, with significant improvements centered in first-lien mortgages and junior liens more than offsetting moderate deterioration in commercial and industrial (C&I), credit cards, and other consumer and other loans. Commercial real estate (CRE) results were flat compared to last year.

		Loan loss percentage (%)					
		2013	**2014**	**2015**	**2016**	**2017**	**Change 2017 - 2016**
Loan type	Total loan losses	7.5	6.9	6.1	6.1	5.8	(0.3)
	First lien mortgages	6.6	5.7	3.6	3.2	2.2	(1.0)
	Junior liens and HELOC	9.6	9.6	8.0	8.1	4.5	(3.6)
	C&I	6.8	5.4	5.4	6.3	6.4	0.1
	CRE	8.0	8.4	8.6	7.0	7.0	-
	Credit cards	16.7	15.2	13.1	13.4	13.7	0.3
	Other consumer	6.1	6.0	5.8	5.7	5.9	0.2
	Other loans	1.8	2.7	2.9	3.4	3.6	0.2

Source: Deloitte analysis of Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results, years 2013 to 2017

While most firms' total loan loss rates improved, as a result of portfolio mix and other factors, about one quarter experienced higher overall losses compared to 2016 as shown below.

DFAST loan loss rates – Difference by BHC (2017 minus 2016)



Source: Deloitte analysis of Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results, years 2013 to 2017

PPNR. In aggregate, DFAST PPNR under stress improved by $34 billion, the largest single contributor to improved results for 2017 over 2016. As a percent of average assets, PPNR improved by 0.1 percent registering the highest level over the past 5 years.

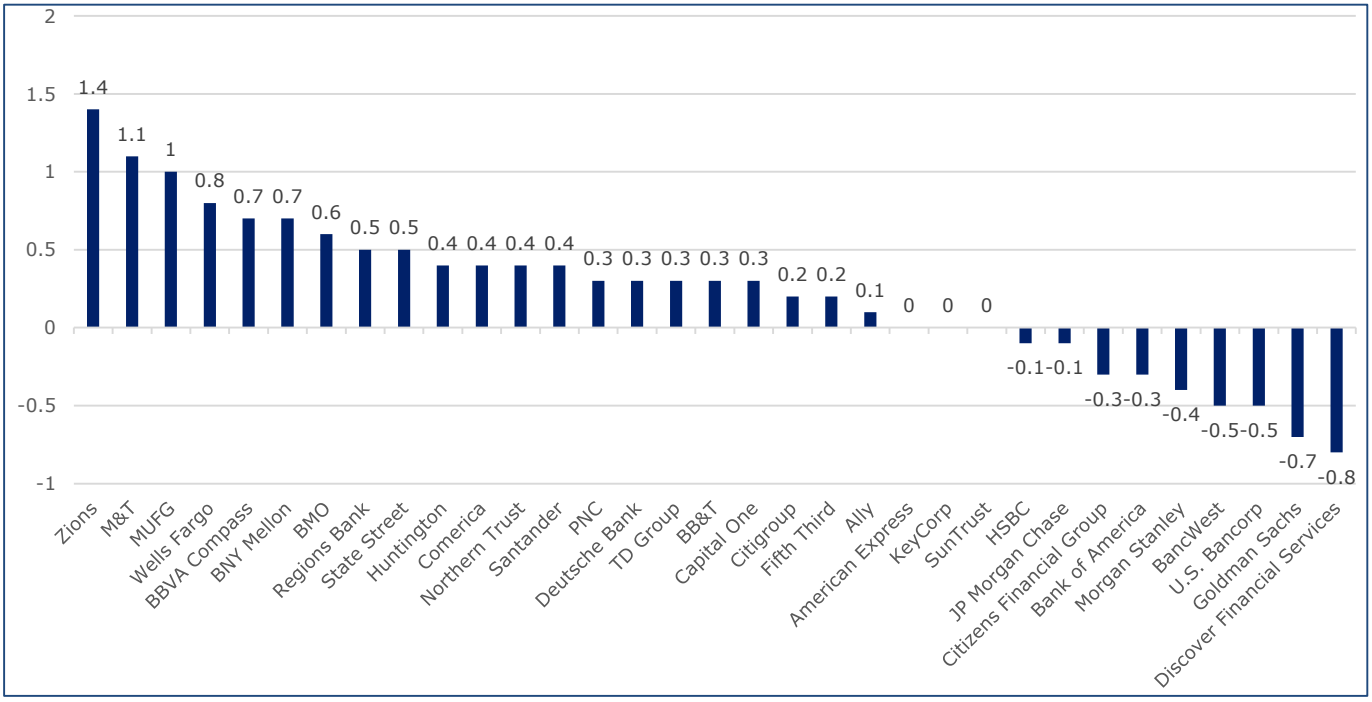
Pre-provision net revenue (PPNR)

	2013	2014	2015	2016	2017
PPNR as % of Average Assets	2.4	2.3	2.1	2.5	2.6

Source: Deloitte analysis of Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results, years 2013 to 2017

PPNR improvements relative to average assets were varied, with about two-thirds of firms seeing improvement, and one third experiencing deterioration.

DFAST PPNR as % of average assets – Difference by BHC (2017 minus 2016)



Source: Deloitte analysis of Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results, years 2013 to 2017

Global market shock and counterparty losses fell markedly.
Losses from the global market shock and counterparty positions applied to the eight trading and custody BHCs fell a dramatic $27 billion (24 percent) compared to 2016. The severely adverse global market shock assumptions for 2017 relative to 2016 had dampened shocks to interest rates and other liquid markets and less severe widening in spreads for mortgage securities.

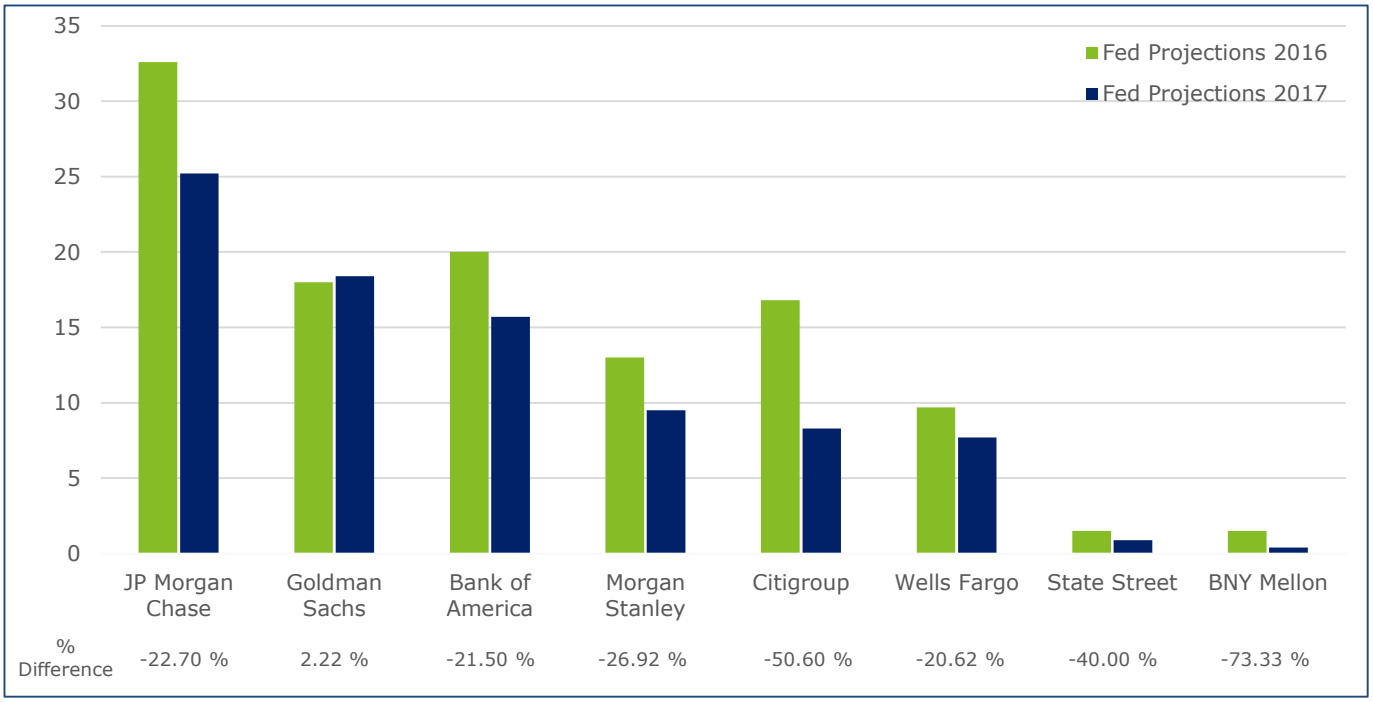
Losses in $Billions

	2013[3]	2014	2015	2016	2017
Losses in $Billions	97	98	103	113	86

Source: Deloitte analysis of Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results, years 2013 to 2017

While most firms did enjoy declines, Goldman Sachs experienced slightly higher losses.

DFAST FED trading and counterparty losses (2017 vs. 2016)



Source: Deloitte analysis of Dodd-Frank Act Stress Test: Supervisory Stress Test Methodology and Results, years 2016 to 2017

Growth in forecasted risk-weighted assets (RWAs) moderated, reducing pressure on ratios.
Aggregate RWAs rose by 8.2 percent compared to 9.6 percent in the prior DFAST. However, forecasted RWA growth differed widely across firms, with 20 of the firms actually forecast to have accelerating RWA growth relative to the prior year.

What's in store for CCAR next year?

The past year has seen a number of actual and proposed changes for the CCAR program. How the program will evolve in the coming year has prompted a great deal of speculation. Here are some areas where shifts are likely to occur.

Global market shock and counterparty losses fell markedly.

Both former Fed Governor Dan Tarullo and Governor Jay Powell have suggested that the qualitative portion of CCAR may have played out its useful life and might be rolled into ongoing supervision similar to what was done for large noncomplex firms (LNFs)3. Governor Powell did caveat that this would be considered only for firms that achieve and sustain acceptable capital planning processes. The recent report from the Treasury Department on regulatory reform also recommends phasing out the qualitative portion of CCAR in acting as a sole reason for objection. Regardless of how the qualitative portion of CCAR is modified, examiners will be reviewing the strength of capital planning processes in one forum or another. They will be evaluating past remediation efforts and issuing new matters requiring attention as new issues are uncovered.

The Fed's list of outstanding shortfalls suggest the need for sustaining momentum in the areas of risk identification, data quality, model risk management and internal audit, among others. In addition, LNFs not subject to the Fed's CCAR qualitative review are nevertheless undergoing capital planning horizontals focused on auto lending, commercial real estate, and internal audit. Those types of reviews may foreshadow what ongoing supervision for the largest firms might look like in the future.

Looking to next year, certain foreign banking organizations with intermediate holding companies (IHCs) underwent a private version of CCAR this year, including the qualitative review. While the future of the qualitative review is uncertain, Governor Powell's comments indicating that firms must achieve and sustain acceptable capital planning processes to exit the qualitative portion of CCAR would suggest these firms are likely to undergo a qualitative review for their first public CCAR.

Potential changes to the Fed's quantitative stress test

In recent Congressional testimony, Governor Powell mentioned that the Fed is considering adjusting assumptions around balance sheet growth and capital distributions in ways that would address industry concerns and be less conservative. On the other hand, he mentioned integrating the stress tests into firms' ongoing capital requirements. These comments echoed those made late last year in a speech by Governor Tarullo in which he suggested replacing Basel III's capital conservation buffer with the Fed's calculation of peak-to-trough stress. Significantly, he also suggested incorporating the surcharge for global systemically important banks (G-SIBs) into post stress capital requirements, creating a higher stress hurdle. These changes to the Fed's capital plan rule and capital regulations would be subject to public notice and comment. Other changes for next year include more fully phasing in enhanced operational loss modeling, which may affect the stress impact of operational losses for a firm relative to prior years.

Better transparency into industry practice and Fed stress models

Also in recent Congressional testimony, Governor Powell indicated the Fed would publish a document summarizing the performance of the industry in achieving the Fed's qualitative expectations. To provide better transparency into its models, the Fed will disclose indicative loss rates for various loan and securities portfolios and disclosing information about risk characteristics that contribute to loss-estimate ranges.

Shift to efficiency, robotics, and operational excellence

After as many as seven years of intensive efforts in building robust capital planning processes and infrastructure and largely meeting supervisory expectations, institutions are ready to pivot to a more sustainable and efficient program that fits more seamlessly into an institution's business-as-usual operations. Increasingly, firms are taking a step back to look at what they have built and are rationalizing the number of steps, handoffs, and overall complexity, with an eye toward streamlining and automating where possible. Several firms are experimenting with the use of robotics in ways that can reduce the likelihood of operational error, reduce costs, and produce more reliable results.

The next destination

Now that firms have reached the summit, they can take a well-deserved moment to savor the view. But like all good climbers, they know they must also prepare for the next stage of the journey, and take what they have learned from this part of the trip and use it wisely in getting to their next destination along the trail. Hopefully, it will be largely downhill from here.

Endnotes

[1]Systemic and complex firms are bank holding companies (BHCs) subject to the Large Institution Supervision Coordinating Committee (LISCC) or BHCs designated as Large and Complex Firms (LCFs). These BHCs have heightened expectations compared to other CCAR firms and are subject to the Fed's qualitative review. See appendix for listings and criteria.

[2]The supplementary leverage ratio is defined as tier 1 capital divided by total leverage exposure, and becomes effective beginning in January of 2018 for BHCs that are subject to the advanced approaches capital framework. Advanced approaches BHCs were required to forecast their supplementary leverage ratios under stress for forecast quarters 1Q2018 through 1Q2019. See the appendix for a listing of firms subject to this ratio.

[3]See appendix for firms no longer subject to the qualitative portion of CCAR

Appendix

2017 CCAR firms1			
LISCC and LCFs2	**SLR4**	**LNFs3**	**SLR[4]**
Subject to CCAR Qualitative Review		**Exempt from CCAR Qualitative Review**	
Bank of America	√	Ally Financial Inc.	
The Bank of New York Mellon Corporation	√	American Express Company	√
Capital One Financial Corporation	√	BancWest Corporation	
Citigroup Inc.	√	BB&T Corporation	
The Goldman Sachs Group, Inc.	√	BBVA Compass Bancshares, Inc.	
HSBC North America Holdings Inc.	√	BMO Financial Corp.	
JPMorgan Chase & Co.	√	CIT Group Inc.	
Morgan Stanley	√	Citizens Financial Group, Inc.	
The PNC Financial Services Group, Inc.	√	Comerica Incorporated	
State Street Corporation	√	Deutsche Bank Trust Corporation	
TD Group US Holdings LLC	√	Discover Financial Services	
US Bancorp	√	Fifth Third Bancorp	
Wells Fargo & Company	√	Huntington Bancshares Incorporated	
		KeyCorp	
		M&T Bank Corporation	
		MUFG Americas Holdings Corporation	
		Northern Trust Corporation	√
		Regions Financial Corporation	
		Santander Holdings USA, Inc.	
		SunTrust Banks, Inc.	
		Zions Bancorporation	

- 1. Does not include five newly formed intermediate holding companies (IHCs), which submitted capital plans subject to a confidential supervisory process.
- 2 Systemic firms supervised by the Large Institutions Supervision Coordinating Committee (LISCC) and Large Complex Firms (LCFs) with average consolidated assets of more than $250 billion, on-balance sheet foreign exposure of $10 billion or more, or average nonbank assets in excess of $75 billion.
- 3 Large Noncomplex Firms (LNFs) with consolidated average assets equal to or greater than $50 billion but less than $250 billion, on-balance sheet foreign exposure of less than $10 billion, nonbank assets less than $75 billion, and not a LISCC firm.
- 4 BHCs subject to the advanced approaches capital framework are subject to the supplementary leverage ratio beginning in 1Q2018, and are required to incorporate that ratio under stress starting for that forecast period and beyond.

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Sources of data utilized within this document from the Board of Governors of the Federal Reserve System are listed below.

1. Comprehensive Capital Analysis and Review 2017: Assessment and Framework and Results, June 2017
2. Comprehensive Capital Analysis and Review 2016: Assessment and Framework and Results, June 2016
3. Comprehensive Capital Analysis and Review 2015: Assessment and Framework and Results, March 2015
4. Comprehensive Capital Analysis and Review 2014: Assessment and Framework and Results, March 2014
5. Comprehensive Capital Analysis and Review 2013: Assessment and Framework and Results, March 2013
6. Dodd-Frank Act Stress Test 2017: Supervisory Stress Test Methodology and Results, June 2017
7. Dodd-Frank Act Stress Test 2016: Supervisory Stress Test Methodology and Results, June 2016
8. Dodd-Frank Act Stress Test 2015: Supervisory Stress Test Methodology and Results, March 2015
9. Dodd-Frank Act Stress Test 2014: Supervisory Stress Test Methodology and Results, March 2014
10. Dodd-Frank Act Stress Test 2013: Supervisory Stress Test Methodology and Results, March 2013

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