Credit outlooks for US banks diverge after Fed stress tests

The idea of conducting comprehensive stress tests with the parameters of the stress test specified by national regulators first emerged in the aftermath of the 2008 financial crisis. They have since been conducted in the US on an annual basis. The ultimate objective of the Federal Reserve's 2012 round of stress tests is to evaluate whether the capital planning processes and capital adequacy of large and complex Bank Holding Companies (BHCs) in the US are sufficient to withstand a negative economic scenario. The stress test should reveal whether the largest institutions hold sufficient capital under their proposed plans to maintain access to funding, in order to continue their role as credit intermediaries and to meet their obligations to creditors and counterparties. To this end, in January 2012, 19 US BHCs were required to submit plans to the Fed explaining their proposed capital management strategies for the 9 quarters between Q4 2011 and Q4 2013. Ultimately those plans should allow the BHCs to show that their balance sheets are strong enough to survive a severe market downturn.

The regulatory capital ratios of the 19 BHCs were evaluated under a hypothetical Supervisory Stress Scenario, given their proposed capital distribution plans. The minimum requirements are listed in the table below.

Federal Reserve capital ratio calculations and minimum requirements

Regulatory Capital Ratio	Minimum Requirement
Tier 1 Capital Ratio = $\frac{\text{Tier 1 Capital}}{\text{Risk Weighted Assets}}$	4%
Total Capital Ratio = $\frac{\text{Total Risk-based Capital}}{\text{Risk Weighted Assets}}$	8%
Tier 1 leverage Ratio = $\frac{\text{Tier 1 Capital}}{\text{Average Assets}}$	3% or 4%*
Tier 1 Common Capital Ratio = $\frac{\text{Tier 1 Common Capital (Equity)}}{\text{Risk Weighted Assets}}$	5%**

**The Tier 1 leverage minimum is 4% for Ally Financial, American Express, Capital One Financial Corporation and MetLife, and 3% for the other 15 BHCs.*

***The minimum levels for BHCs to be considered adequately capitalized are 4 percent for the tier 1 ratio, however BHCs were required to demonstrate their ability to maintain tier 1 common ratios above 5 percent.*

Source: Federal Reserve Comprehensive Capital Analysis and Review 2012

The test included 25 domestic and internal economic variables, which decline significantly over the nine quarters of the hypothetical scenario. The key economic variables included in the Supervisory Stress Scenario are outlined below.

Hypothetical economic scenario is similar to post-GFC decline

	Supervisory Stress Scenario 2012	Empirical data, 2007-2010
Maximum GDP decline, annualized basis	-7.98%	-8.89%
Maximum Unemployment	13%	10%
Dow Jones Total Stock market Index	-50%	-47%
Corelogic National House Price Index	-20%	-28%

Source: Federal Reserve Comprehensive Capital Analysis and Review 2012

The scenario also assumed a significant global slowdown and an increase in risk premia, with the six largest US BHCs (*Bank of America, Citigroup, Goldman Sachs, J.P. Morgan, Morgan Stanley and Wells Fargo*) also tested for losses on global trading, private equity and derivatives positions. Hypothetical losses for the 19 financial institutions involved in the stress tests reached USD 534bn over the nine quarters of the scenario, with trading and counterparty losses at the six largest BHCs totaling USD 116bn under the stress test, or 21.7% of projected losses.

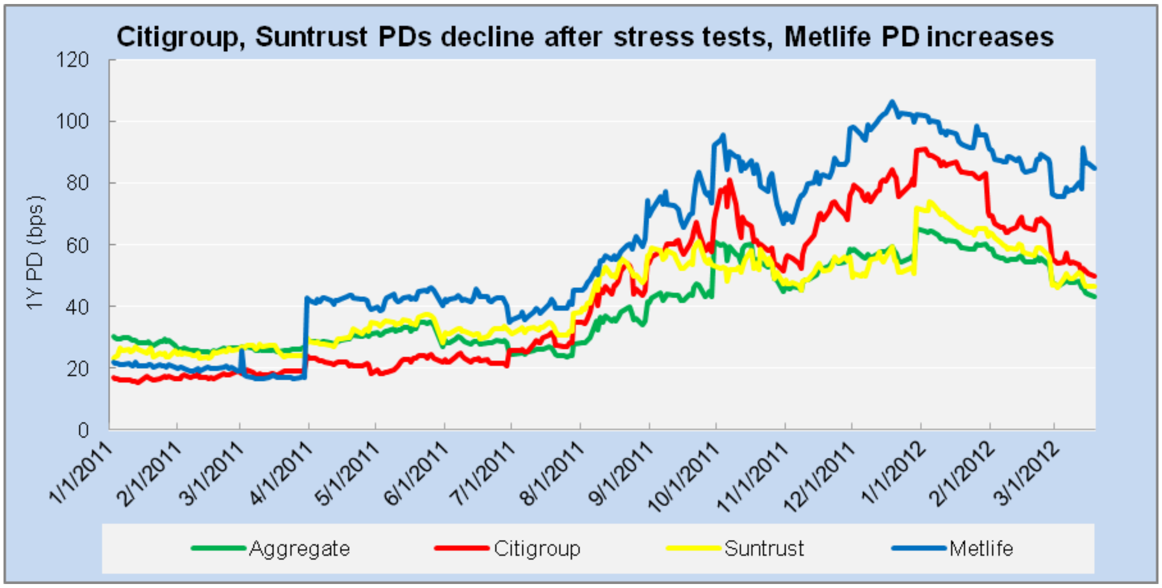
On March 13, 2012 the Fed announced that 15 out of 19 BHCs passed the stress test, even with their proposed dividend payouts and share repurchases. The 15 BHCs in question were found to have sufficient equity, even if the US economy were to suffer a serious downturn. On this positive note, the 15 banks were allowed to carry out their dividend payouts and share repurchases. On average, shares of the 18 listed institutions rose 4.28% from the start of trading on March 13 to the market close on March 14. Despite 4 banks failing the tests, the market rewarded banks for strong all-around results. Bank of America, Goldman Sachs and J.P. Morgan led the surge, with each bank recording share price gains of at least 5% on March 13. Of the four BHCs whose capital plans did not pass the Fed's stress test only the insurer MetLife experienced a drop in its share price, down 2.5% between opening on March 13 and closing on March 14. The shares of Citigroup and SunTrust, the other two listed banks that failed the test, increased 1% and 6% respectively from March 13 to March 14.

As changes in share prices are an important driver of daily changes in the CRI probability of default (PD) model, the PDs of most BHCs stayed in the same range, with only MetLife's PD increasing significantly.

In the remainder of this report we compare the outcome of the stress test and the CRI PD for a selected group of 12 BHCs. In our selection we include the eight largest US banks (by total assets): J.P. Morgan Chase, Bank of America, Citigroup, Wells Fargo, Goldman Sachs, MetLife, Morgan Stanley, US Bancorp and Bank of New York Mellon. In addition we include four other banks that merit special attention. More specifically, next to Citibank, we include the two other listed BHCs that failed the test, MetLife and SunTrust. In addition to the BNY Mellon, we include the two other banks that performed best on the test, State Street and American Express. Ally Financial was the fourth bank that did not pass the Fed's stress test. However, as this bank is majority state-owned and unlisted, it is not covered by the CRI PD system.

When comparing the stress test results and the 1-year PD it is important to keep in mind that both serve a different purpose. The PD reflects the probability of the bank defaulting within one year, whereas the stress tests reveal whether a bank would be able to maintain capital ratios above a minimum threshold during a period of severe market stress. Also, the CRI PD is conditional on currently available information, whereas the stress test is conditional on the banks' capital plans being implemented under stress scenarios. This explains for example why Bank of America, which passed the stress test, can have a PD that is significantly higher than the PD for Citigroup which failed the test. At this point, important financial health measures such as market-to-book and distance-to-default are worse for Bank of America than for Citigroup.

1. **Banks that failed: Citigroup, SunTrust and MetLife**



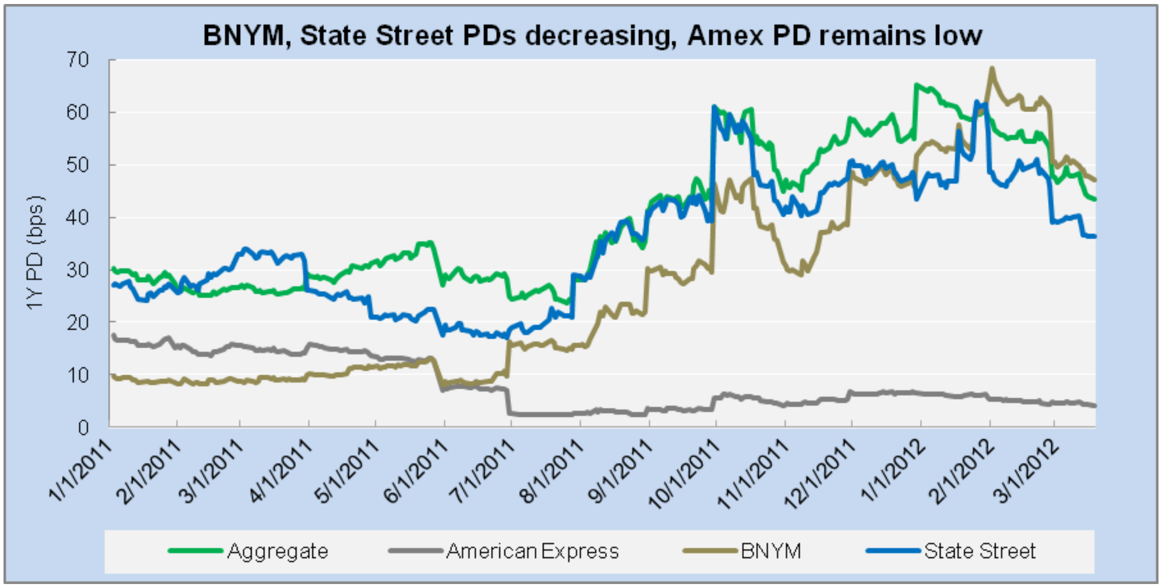
		12-Mar	13-Mar	14-Mar
Citigroup Inc	Share price (USD)	34.29	36.45	35.21
	CRI 1-year PD (bps)	53.58	50.72	52.56
MetLife Inc	Share price (USD)	37.68	39.46	37.16
	CRI 1-year PD (bps)	80.41	78.09	91.35
SunTrust Banks	Share price (USD)	21.88	22.58	23.61
	CRI 1-year PD (bps)	51.23	50.11	48.06

Source: Bloomberg, CRI

Citigroup and SunTrust recorded Tier 1 Common Capital Ratios of 4.9% and 4.8% respectively under the stress scenario given proposed capital plans, failing to meet the minimum requirement of 5%. In the case that the two BHCs did not carry out any capital actions after Q1 2012, the ratios for Citigroup and SunTrust would decline to 5.9% and 5.5% respectively. As is shown on the graph above, both companies PDs decreased after the stress test results were released. This can be explained by the fact that the negative news on the stress test did not significantly affect the banks' share price. Investors were apparently comforted by the fact that excluding proposed capital returns to shareholders results in capital ratios above the minimum, even in a stressed scenario.

MetLife, the largest US life insurer, was included in the tests due to its online retail banking operations, which GE Capital will take over in mid-2012. The company met the Tier 1 Common Capital Ratio requirements under the stress tests, but failed the Total Capital Ratio and Tier 1 Leverage Ratio requirements by 2% and 0.6% respectively assuming proposed capital actions, and still failed by 1.7% and 0.4% respectively given no capital actions after Q1 2012. The PD for MetLife has been consistently higher than the aggregate PD since March 2011 and further increased from 78 to 91bps on March 14, the day after the stress test results were announced. This surge in PD is mainly caused by the drop in MetLife's share price.

2. **Banks that performed best: BNY Mellon, State Street and American Express**



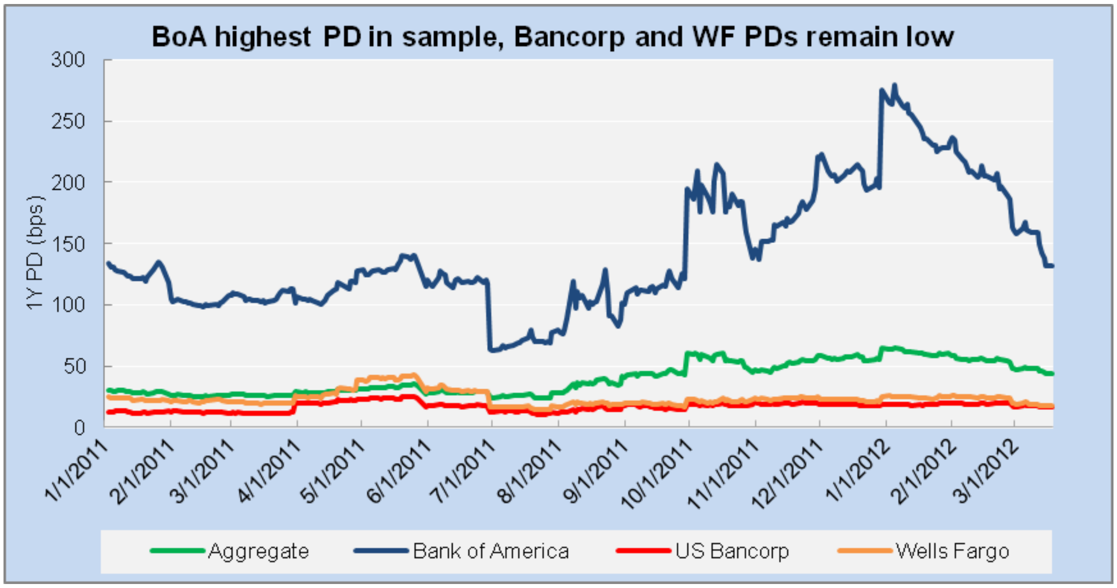
		12-Mar	13-Mar	14-Mar
American Express Co	Share price (USD)	52.77	54.25	56.15
	CRI 1-year PD (bps)	4.77	4.61	4.27
BNY Mellon	Share price (USD)	22.62	23.28	23.20
	CRI 1-year PD (bps)	49.82	48.96	49.11
State Street	Share price (USD)	41.68	43.87	44.88
	CRI 1-year PD (bps)	40.38	38.07	36.71

Source: Bloomberg, CRI

American Express, BNY Mellon and State Street scored the highest on the stress tests. The three BHCs are isolated from the losses assumed in the stress test, mainly due to the nature of their businesses. American Express generates a majority of its revenues from its charge and credit card business. BNY Mellon and State Street are the first and third largest global custody banks respectively, generating a large proportion of their income from custodian duties. The regulatory ratios for these three banks are significantly higher than the median values recorded in the stress scenario. For example, the Tier 1 Common Ratio in the stressed scenario for each of the three banks was above 10%, while the median for the 19 BHCs tested was 5.9%.

American express will repurchase USD 5bn of its own stock and increase its dividend to 20 cents per share. State Street will increase its quarterly dividend to 24 cents per share, while BNY Mellon will keep its dividend at 13 cents per share, and repurchase up to USD 1.16bn of its own stock. This positive news was reflected in the share prices for each of these banks and translated into a decline in their PDs. The PDs for BNY Mellon and State Street have tracked the aggregate PD in recent weeks; previously the PD for BNY Mellon was well below the aggregate.

3. Banks in the middle of the pack: Bank of America, US Bancorp and Wells Fargo



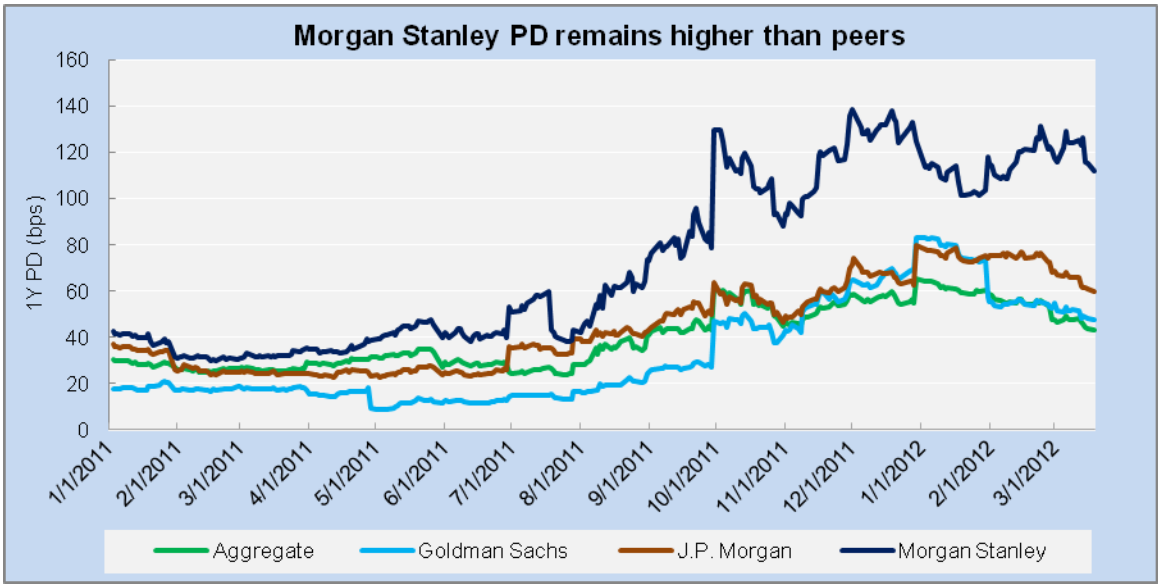
		12-Mar	13-Mar	14-Mar
Bank of America	Share price (USD)	7.99	8.49	8.84
	CRI 1-year PD (bps)	159.18	149.65	142.15
US Bancorp	Share price (USD)	29.68	31.01	31.48
	CRI 1-year PD (bps)	17.39	16.53	16.13
Wells Fargo	Share price (USD)	31.51	33.33	33.37
	CRI 1-year PD (bps)	19.19	17.94	17.85

Source: Bloomberg, CRI

Bank of America US Bancorp and Wells Fargo and passed the stress test with capital ratios of 5.9%, 5.4% and 6% respectively including capital actions. While Wells Fargo was allowed to increase its quarterly cash dividend to 22 cents per share and US Bancorp received permission to increase its dividend to 78 cents per share, Bank of America did not request any capital returns after its proposed dividend increase had been rejected in 2011.

The share price of all three banks increased after the results of the stress test were announced. This share price reaction positively affected the PD for those banks. Despite this positive news the PD of Bank of America remains at the highest level of all 18 listed banks included in the stress test. This is largely due to the fact that the computed distance-to-default (DTD) of Bank of America is the lowest (worst) of the 18 banks. *(The DTD is a volatility-adjusted measure of leverage that is used as an input in the computation of the CRI PD).* Bank of America's comparatively poor DTD is caused by a high proportion of short-term debt relative to the other banks. Notably, Bank of America's market-to-book value of equity is the lowest among the 18 banks.

4. Banks that were close to supervisory requirements: Goldman Sachs, J.P. Morgan and Morgan Stanley



		12-Mar	13-Mar	14-Mar
Goldman Sachs	Share price (USD)	116.99	124.54	120.37
	CRI 1-year PD (bps)	51.56	48.18	49.08
JPMorgan Chase	Share price (USD)	40.54	43.39	43.58
	CRI 1-year PD (bps)	65.83	61.90	61.59
Morgan Stanley	Share price (USD)	18.20	18.93	18.60
	CRI 1-year PD (bps)	125.22	123.01	126.39

Source: Bloomberg, CRI

Of the fifteen institutions that passed Goldman Sachs, J.P. Morgan and Morgan Stanley all proposed capital plans that would result in their regulatory capital ratios being close to supervisory requirements under the stress scenario. Morgan Stanley performed the worst, with a Tier 1 Common Capital Ratio of 5.4% and a Tier 1 Leverage Ratio of 3.4%, assuming no capital actions through Q4 2013, both only 0.4% higher than the minimum regulatory levels. Due to the bank's relatively low DTD, smaller relative size and higher idiosyncratic risk the 1-year PD for Morgan Stanley has remained significantly higher than the aggregate PD since mid-2011.

J.P. Morgan increased its dividend to 30 cents per share and will repurchase USD 15bn of its own shares. Morgan Stanley announced it will keep its dividend at the same level and potentially use cash to buy another 14% stake of its Morgan Stanley Smith Barney joint venture with Citigroup. Goldman Sachs' plan to repurchase stock and increase its quarterly common stock dividend was approved by the Fed. The bank will buyback Warren Buffet's preferred share stake, but has not yet revealed further details on common share buybacks or dividend increases.

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References:

CCAR 2012: Methodology and Results for Stress Scenario Projections (Federal Reserve)

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