

Bank of America  
2014 Dodd-Frank Act Annual Stress Test Results  
Supervisory Severely Adverse Scenario  
March 20, 2014



Bank of America Merrill Lynch U.S. Bank of America  
America Lynch Trust Merrill Lynch

# Important Presentation Information

The 2014 Dodd-Frank Act Annual Stress Test Results Disclosure (the “Stress Test Results”) included herein has not been prepared under generally accepted accounting principles (“GAAP”). The Stress Test Results present certain projected financial measures for Bank of America Corporation (“Bank of America”, “BAC”, or “the Company”); Bank of America, National Association (“BANA”); and FIA Card Services, National Association (“FIA”) under the hypothetical economic and market scenario and assumptions described herein. The Stress Test Results are not forecasts of actual financial results for BAC, BANA, and FIA. Investors in securities issued by Bank of America should not rely on the Stress Test Results as being indicative of expected future results.

Bank of America’s financial information, prepared under GAAP, is available in reports filed with the Securities and Exchange Commission, including its Annual Report on Form 10-K for the year ended December 31, 2013.

Amounts presented are rounded to the nearest significant digit, as indicated or stated. Immaterial differences arising from the effect of rounding are not adjusted.

The stress testing of financial institutions conducted by the Board of Governors of the Federal Reserve System (“FRB”) is based on models and methodologies developed or employed by the FRB. The FRB does not disclose details of its models and methodologies. Therefore, Bank of America may not be able to explain certain variances between the FRB’s projections and Bank of America’s Stress Test Results included herein.

# Assumptions

- This document provides internal projections for BAC, BANA, and FIA under the stressed macroeconomic and market conditions in the Supervisory Severely Adverse scenario as prescribed by the FRB and the Office of the Comptroller of the Currency (“OCC”) at <http://www.federalreserve.gov/bankinfo/bcreg20131101a1.pdf>.
- The Supervisory Severely Adverse scenario exhibits a deep recession in the U.S. and a significant decline in global economic activity over the nine-quarter horizon, characterized by the following key macroeconomic variables:
  - Maximum quarterly (annualized) rate of gross domestic product (“GDP”) decline of 6%
  - Peak unemployment rate of 11.3%
  - Maximum home price index decline of 26% from 3Q13
  - Maximum equity markets decline of 50% from 3Q13
  - Trough U.S. 10-year Treasury yield of 1.0%
  - Severe instantaneous global market shocks that focused upon four key areas, specifically Government and Sovereign Yield Curves, Emerging Markets Sovereigns and Corporates, Euro-area Credit-themed Crisis, and Other Asset Classes
- Results presented herein include capital actions as specified under the Dodd-Frank Wall Street Reform and Consumer Protection Act (“DFA”) stress testing rules. Specified capital actions are itemized on page 25.
- Results comply with methodologies and instructions provided by the FRB and OCC for the 2014 Comprehensive Capital Analysis and Review and Dodd-Frank Act Stress Test.
- Results presented are estimates and may not reflect the actual impacts to Bank of America if such a hypothetical scenario were to occur. Importantly, in certain instances, methodologies required by the FRB and OCC differ from Bank of America’s internal practices; therefore, results may not reflect actions Bank of America would likely employ under such stressed conditions.
- The stress test was applied to non-trading on- and off-balance sheet exposures as of September 30, 2013, and to trading exposures as of October 16, 2013.
- Capital, risk-weighted assets, and capital ratios are calculated under the applicable Basel regime. Values as of September 30, 2013 and December 31, 2013 are calculated on a Basel 1 basis. Values in 2014 and 2015 are calculated on a Basel 3 basis in accordance with the transitional arrangements provided in the Basel 3 final rule.
- Income statement categories in this document conform to the FRB’s and OCC’s definition of Pre-Provision Net Revenue (“PPNR”) and classifications of revenue and expense items may differ from reporting under GAAP and public financial disclosures.



Bank of America Corporation

# Supervisory Severely Adverse – BAC Results

- A \$38.3B cumulative pre-tax loss was projected over the specified nine-quarter horizon under the Supervisory Severely Adverse scenario.
- Material impacts to earnings included loan and lease losses (\$30.3B), incremental build in allowance for loan and lease losses (\$11.5B), trading and counterparty losses (\$14.9B), goodwill impairments (\$7.7B which are excluded from Regulatory Capital) and other losses (\$0.6B), partially offset by \$26.2B of PPNR and other revenues of \$1.1B.
- Due to the impact of the hypothetical pre-tax losses, the deferred tax asset (“DTA”) increased, resulting in a higher disallowed deferred tax asset which reduced capital and capital ratios.
- Risk-weighted assets declined primarily driven by a reduction in credit risk-weighted assets resulting from reduced loan demand consistent with the severely adverse macroeconomic conditions of the scenario, partially offset by an increase in market risk-weighted assets resulting from the stressed market and economic conditions.
- The Basel 1 Tier 1 Common Capital ratio declined from 11.1% at September 30, 2013 to an estimate in the Supervisory Severely Adverse scenario of 8.6% at its lowest point and 9.1% at December 31, 2015.
- Under Basel 3 Transition, the estimated lowest stress ratios over the nine-quarter horizon for Common Equity Tier 1 Capital, Tier 1 Capital, Total Capital and Tier 1 Leverage were 8.6%, 8.6%, 11.2% and 5.7%, respectively.
- BAC maintains capital above required regulatory minimums in all baseline and stress scenarios under both Basel 1 and Basel 3 Standardized Transition (“B3S”) rules. The required regulatory minimums are provided for reference on page 26.

# Supervisory Severely Adverse – BAC Capital, Risk-Weighted Assets, and Balance Sheet

Pro Forma Capital Ratios <sup>1</sup>	Actual Ratios at 9/30/13	Hypothetical Stressed Ratios at 12/31/15	Hypothetical Stressed Minimum Ratios <sup>2</sup>
Tier 1 Common Capital Ratio	11.1%	9.1%	8.6%
Common Equity Tier 1 Capital Ratio	n/a	9.1%	8.6%
Tier 1 Capital Ratio	12.3%	9.1%	8.6%
Total Capital Ratio	15.4%	11.5%	11.2%
Tier 1 Leverage Ratio	7.8%	5.8%	5.7%

Capital/Risk-Weighted Assets \$ in billions	Actual Balances at 9/30/13	Balances at 12/31/15	Balances at Capital Ratio Minimum <sup>3</sup>
Tier 1 Common Capital	\$142.8	\$103.1	\$101.2
Basel 1 Risk-Weighted Assets	1,289.4	1,139.0	1,178.5
Common Equity Tier 1 Capital	n/a	113.7	111.3
Basel 3 Risk-Weighted Assets	n/a	1,256.5	1,287.6

Balance Sheet <sup>4</sup> \$ in billions	Actual Balances at 9/30/13	Balances at 12/31/15	Balances at Common Equity Tier 1 Capital Ratio Minimum
Total Assets	2,128.7	2,022.1	1,998.6
Deposits	1,112.1	1,129.9	1,104.1

**Note:** Hypothetical stressed results presented are BAC's internal projections for the Supervisory Severely Adverse scenario using the rules and conditions set forth by the FRB and OCC with capital actions for BAC as required under DFA stress testing rules. See "Capital" on page 25.

<sup>1</sup> Capital ratios are calculated under the applicable Basel regime. Values in 2013 are calculated on a Basel 1 basis. Values in 2014 and 2015 are calculated on a Basel 3 basis in accordance with the transitional arrangements provided in the Basel 3 final rule.

<sup>2</sup> Minimum hypothetical ratio during the specified nine-quarter horizon.

<sup>3</sup> Capital and Risk-Weighted Assets are the balances from the quarter of the minimum capital ratio (Tier 1 Common Capital Ratio for Basel 1 and Common Equity Tier 1 Capital Ratio for Basel 3).

<sup>4</sup> Balances for Total Assets and Deposits are as reported in the FR Y-14A Summary Template for BAC.

# Supervisory Severely Adverse – BAC Net Income Before Taxes and Loan and Lease Losses

Net Income Before Taxes \$ in billions	Cumulative Hypothetical Results Over 9 Quarters	% of Average Assets <sup>5</sup>
Pre-Provision Net Revenue <sup>1</sup>	\$26.2	1.3%
Other Revenue <sup>2</sup>	1.1	
Less:		
Provision for Loan and Lease Losses	41.8	
Realized Losses on Securities (AFS/HTM)	0.4	
Trading and Counterparty Losses <sup>3</sup>	14.9	
Goodwill Impairment	7.7	
Other Losses <sup>4</sup>	0.6	
Net Income (Loss) Before Taxes	(\$38.3)	-1.9%

Loan and Lease Losses \$ in billions	Cumulative Hypothetical Results Over 9 Quarters	Portfolio Loss Rates (%) <sup>7</sup>
Estimated Loan and Lease Losses <sup>6</sup>	\$30.3	3.6%
First Lien Mortgages, Domestic	4.9	2.0%
Junior Liens and HELOCs, Domestic	5.2	6.1%
Commercial and Industrial	3.9	2.2%
Commercial Real Estate	2.0	3.5%
Credit Cards	12.0	12.6%
Other Consumer	1.4	2.1%
Other Loans	0.9	0.8%

**Note:** Hypothetical stressed results presented are BAC's internal projections for the Supervisory Severely Adverse scenario using the rules and conditions set forth by the FRB and OCC with capital actions for BAC as required under DFA stress testing rules.

<sup>1</sup> Pre-provision net revenue ("PPNR") includes losses from operational risk events, mortgage put-back expenses, legal expenses and OREO costs. PPNR in this disclosure does not include projected changes in the fair value of loans held for sale and loans held for investment measured under the fair-value option.

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

<sup>3</sup> Trading and counterparty includes mark-to-market losses, changes in credit valuation adjustments (CVA) and incremental default losses.

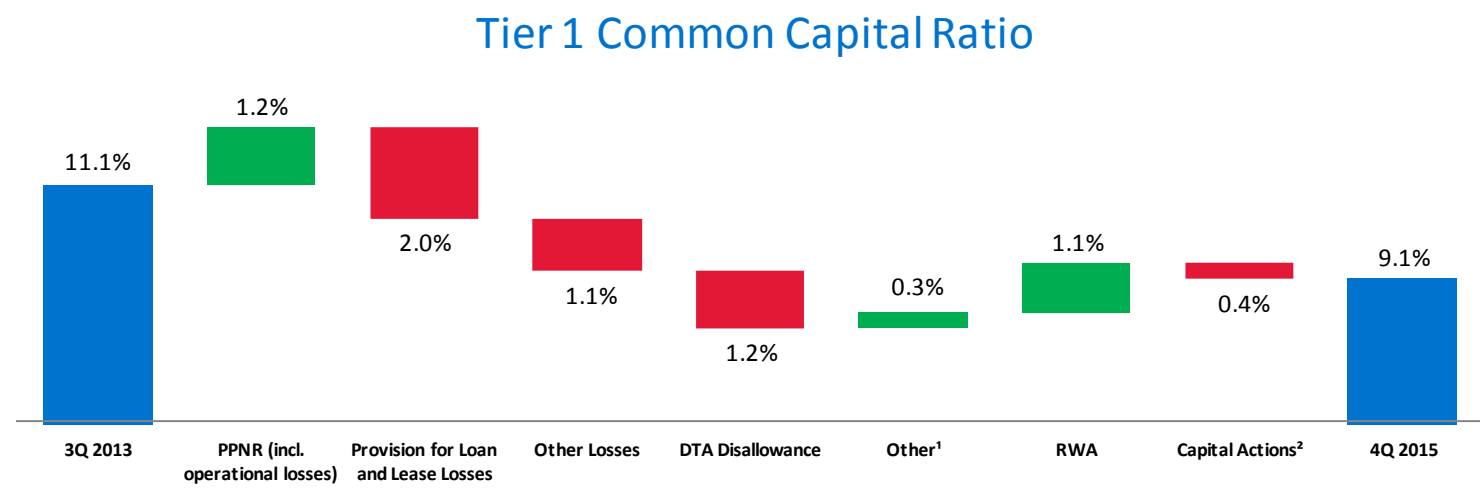
<sup>4</sup> Other losses include projected change in the fair value of loans held for sale and loans held for investment measured under the fair-value option.

<sup>5</sup> Calculated by dividing nine-quarter cumulative revenue or earnings by the average of the quarter ending balances over the specified nine-quarter horizon.

<sup>6</sup> Commercial and industrial loans include small and medium enterprise loans and corporate cards. Other loans include international real estate loans.

<sup>7</sup> Calculated by dividing the nine-quarter cumulative loan and lease losses by the average of the accrual loan and lease balances for each portfolio over the same time period.

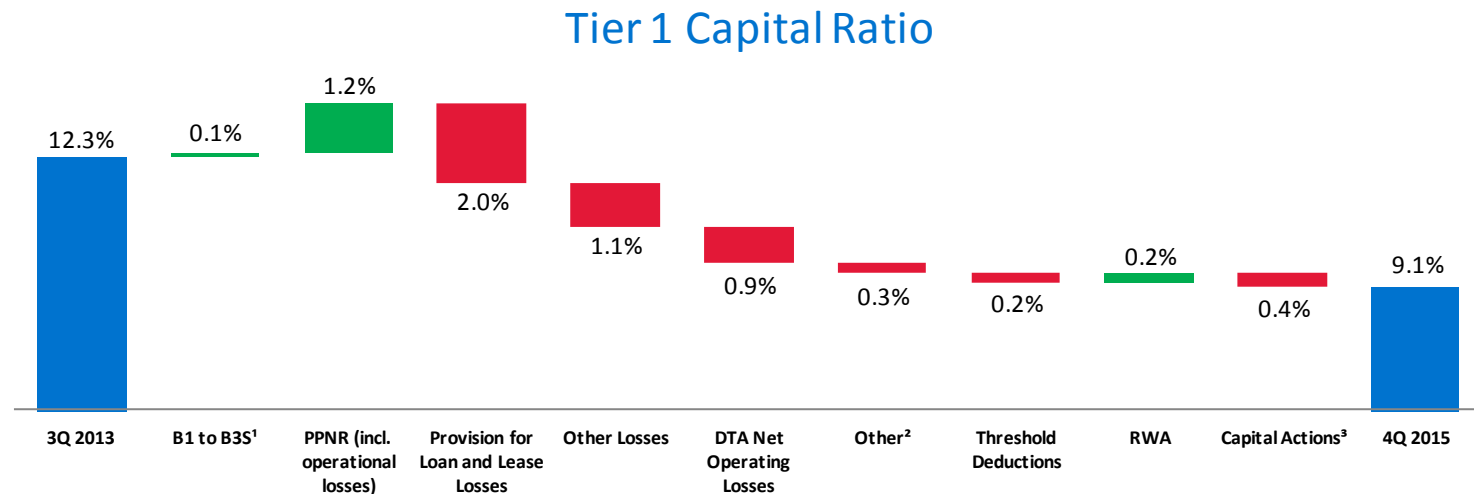
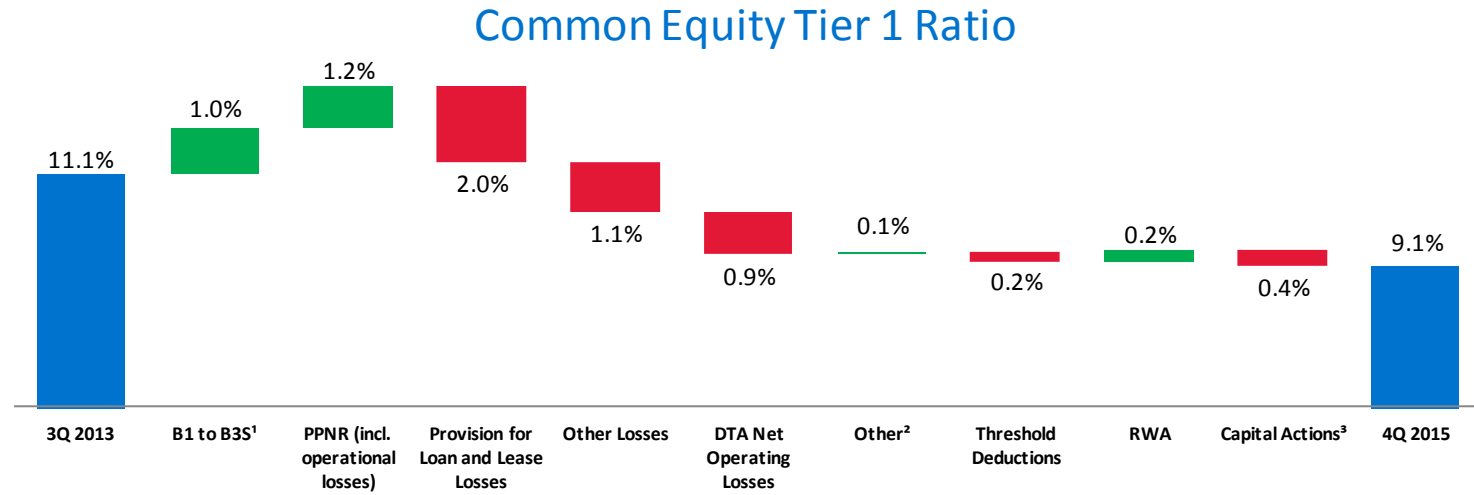
# Supervisory Severely Adverse – Significant Regulatory Capital Ratio Drivers



<sup>1</sup> Other includes adjustments for items such as: (i) goodwill, (ii) intangibles, (iii) other comprehensive income, (iv) FVO, (v) stock-based compensation, and other miscellaneous adjustments as applicable for the respective ratio.  
<sup>2</sup> Capital actions include common and preferred dividends and common share repurchases per DFA rules as detailed on page 25.



# Supervisory Severely Adverse – Significant Regulatory Capital Ratio Drivers

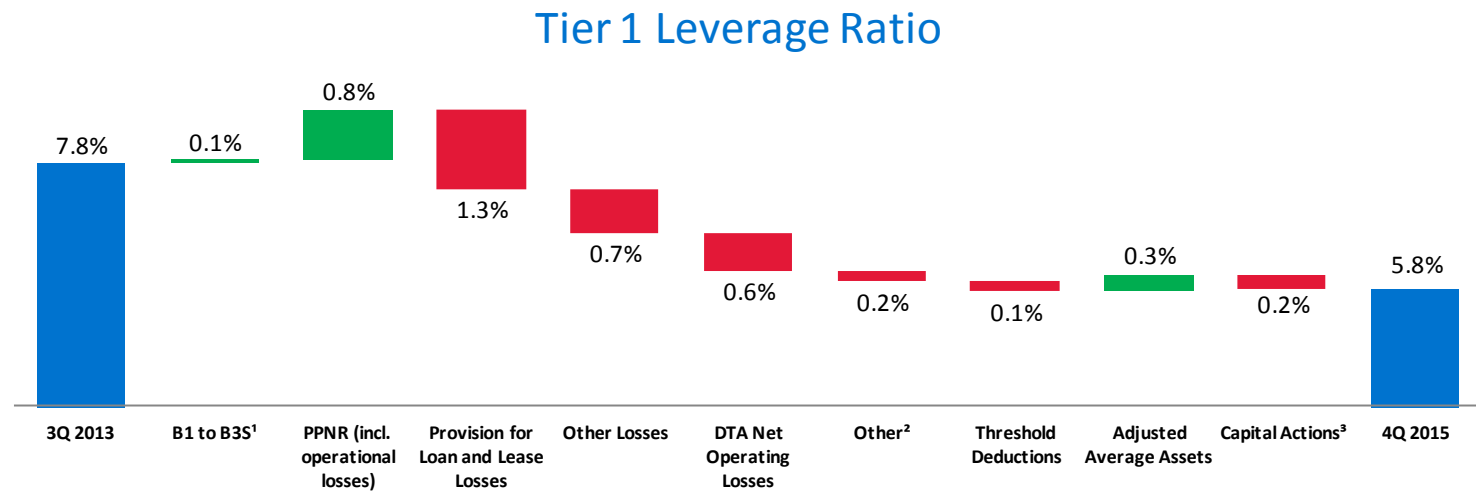
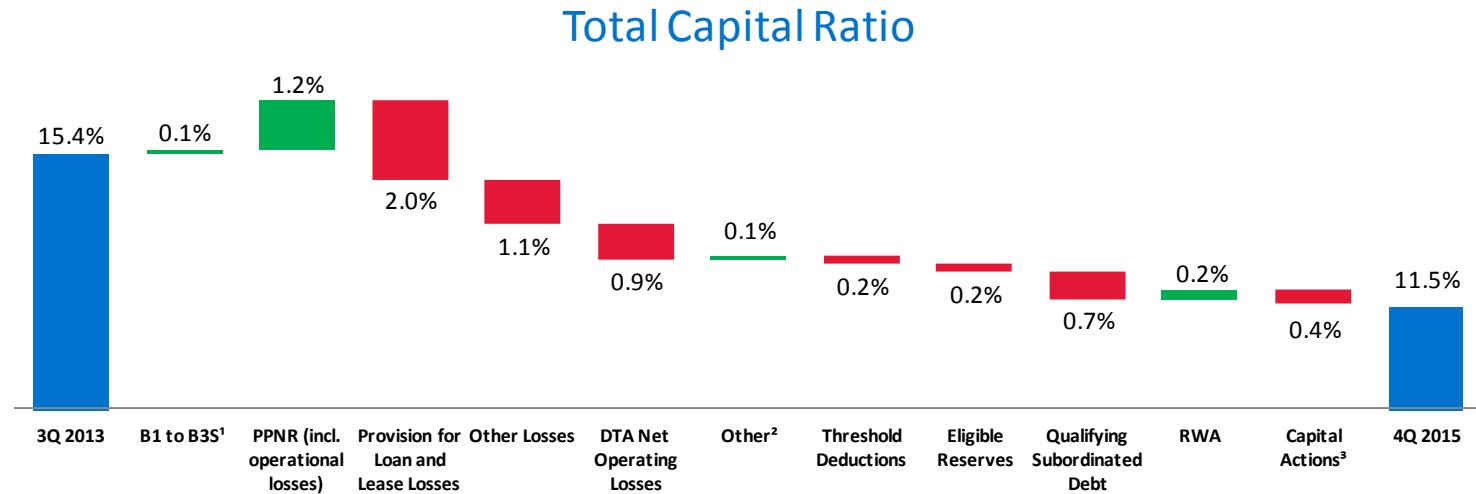


<sup>1</sup> The B1 to B3S adjustment includes the benefit to the respective capital ratio from switching from Basel 1 to Basel 3 at 3Q 2013. This represents an increase to reflect the Basel 3 starting ratio and all other adjustments included are calculated based on the Basel 3 pro forma ratio as of 3Q 2013. The benefit to the Common Equity Tier 1 Ratio is primarily due to the difference in the transition treatment of the DTA deduction in Basel 3 compared to a Tier 1 Common Capital deduction under Basel 1.

<sup>2</sup> Other includes adjustments for items such as: (i) goodwill, (ii) intangibles, (iii) other comprehensive income, (iv) FVO, (v) stock-based compensation, and other miscellaneous adjustments as applicable for the respective ratio.

<sup>3</sup> Capital actions include common and preferred dividends and common share repurchases per DFA rules as detailed on page 25.

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<sup>2</sup> Other includes adjustments for items such as: (i) goodwill, (ii) intangibles, (iii) other comprehensive income, (iv) FVO, (v) stock-based compensation, and other miscellaneous adjustments as applicable for the respective ratio.

<sup>3</sup> Capital actions include common and preferred dividends and common share repurchases per DFA rules as detailed on page 25.

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Bank of America, N.A.

## Supervisory Severely Adverse – BANA Results

- \$7.3B of cumulative pre-tax income was projected over the specified nine-quarter horizon under the Supervisory Severely Adverse scenario.
- Earnings included \$36.3B of PPNR and \$0.2B of other revenues, partially offset by loan and lease losses (\$16.6B), incremental build in allowance for loan and lease losses (\$9.1B), realized losses on securities (\$0.3B), trading and counterparty losses (\$1.6B), and other losses (\$1.7B).
- Risk-weighted assets declined primarily driven by a reduction in credit risk-weighted assets resulting from reduced loan demand consistent with the severely adverse macroeconomic conditions of the scenario, partially offset by an increase in market risk-weighted assets resulting from the stressed market and economic conditions.
- Results for BANA included expected capital distributions to its parent company over the specified nine-quarter horizon taking into account the impacts of the Supervisory Severely Adverse scenario. Expected BANA capital distributions are subject to regulatory requirements, including regulations 12 USC 60, 12 USC 56 and 12 CFR 5.64. Excluding expected capital distributions from BANA to its parent company, BANA's capital ratios would be higher.
- The Basel 1 Tier 1 Common Capital ratio declined from 12.4% at September 30, 2013 to an estimate in the Supervisory Severely Adverse scenario of 11.9% at its lowest point and increased to 14.0% at December 31, 2015.
- Under Basel 3 Transition, the estimated lowest stress ratios over the nine-quarter horizon for Common Equity Tier 1 Capital, Tier 1 Capital, Total Capital and Tier 1 Leverage were 11.7%, 11.7%, 13.1% and 8.9%, respectively.

# Supervisory Severely Adverse – BANA Capital, Risk-Weighted Assets, and Balance Sheet

Pro Forma Capital Ratios <sup>1</sup>	Actual Ratios at 9/30/13	Hypothetical Stressed Ratios at 12/31/15	Hypothetical Stressed Minimum Ratios <sup>2</sup>
Tier 1 Common Capital Ratio	12.4%	14.0%	11.9%
Common Equity Tier 1 Capital Ratio	n/a	12.3%	11.7%
Tier 1 Capital Ratio	12.4%	12.3%	11.7%
Total Capital Ratio	14.0%	13.7%	13.1%
Tier 1 Leverage Ratio	9.2%	9.3%	8.9%

Capital/Risk-Weighted Assets \$ in billions	Actual Balances at 9/30/13	Balances at 12/31/15	Balances at Capital Ratio Minimum <sup>3</sup>
Tier 1 Common Capital	\$125.8	\$123.7	\$122.2
Basel 1 Risk-Weighted Assets	1,013.3	885.6	1,023.2
Common Equity Tier 1 Capital	n/a	121.8	120.6
Basel 3 Risk-Weighted Assets	n/a	991.2	1,028.6

Balance Sheet <sup>4</sup> \$ in billions	Actual Balances at 9/30/13	Balances at 12/31/15	Balances at Common Equity Tier 1 Capital Ratio Minimum
Total Assets	1,438.9	1,406.3	1,405.9
Deposits	1,118.3	1,083.4	1,072.8

**Note:** Hypothetical stressed results presented are internal projections for the Supervisory Severely Adverse scenario using the rules and conditions set forth by the FRB and OCC. Capital ratios include the impact of expected capital distributions to its parent company over the specified nine-quarter horizon. Expected capital actions may be subject to regulatory requirements.

<sup>1</sup> Capital ratios are calculated under the applicable Basel regime. Values in 2013 are calculated on a Basel 1 basis. Values in 2014 and 2015 are calculated on a Basel 3 basis in accordance with the transitional arrangements provided in the Basel 3 final rule.

<sup>2</sup> Minimum hypothetical ratio during the specified nine-quarter horizon.

<sup>3</sup> Capital and Risk-Weighted Assets are the balances from the quarter of the minimum capital ratio (Tier 1 Common Capital Ratio for Basel 1 and Common Equity Tier 1 Capital Ratio for Basel 3).

<sup>4</sup> Balances for Total Assets and Deposits are as reported in the DFAST-14A Summary Template for BANA.

# Supervisory Severely Adverse – BANA Net Income Before Taxes and Loan and Lease Losses

Net Income Before Taxes \$ in billions	Cumulative Hypothetical Results Over 9 Quarters	% of Average Assets <sup>5</sup>
Pre-Provision Net Revenue <sup>1</sup>	\$36.3	2.6%
Other Revenue <sup>2</sup>	0.2	
Less:		
Provision for Loan and Lease Losses	25.7	
Realized Losses on Securities (AFS/HTM)	0.3	
Trading and Counterparty Losses <sup>3</sup>	1.6	
Goodwill Impairment	-	
Other Losses <sup>4</sup>	1.7	
Net Income (Loss) Before Taxes	\$7.3	0.5%

Loan and Lease Losses \$ in billions	Cumulative Hypothetical Results Over 9 Quarters	Portfolio Loss Rates (%) <sup>7</sup>
Estimated Loan and Lease Losses <sup>6</sup>	\$16.6	2.4%
First Lien Mortgages, Domestic	4.3	2.0%
Junior Liens and HELOCs, Domestic	5.1	6.1%
Commercial and Industrial	3.0	1.7%
Commercial Real Estate	2.0	3.5%
Credit Cards	-	-
Other Consumer	1.3	2.0%
Other Loans	0.8	1.0%

**Note:** Hypothetical stressed results presented are internal projections for the Supervisory Severely Adverse scenario using the rules and conditions set forth by the FRB and OCC.

<sup>1</sup> PPNR includes losses from operational risk events, mortgage put-back expenses, legal expenses and OREO costs. PPNR in this disclosure does not include projected changes in the fair value of loans held for sale and loans held for investment measured under the fair-value option.

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

<sup>3</sup> Trading and counterparty includes mark-to-market losses, changes in credit valuation adjustments (CVA) and incremental default losses.

<sup>4</sup> Other losses include projected change in the fair value of loans held for sale and loans held for investment measured under the fair-value option.

<sup>5</sup> Calculated by dividing nine-quarter cumulative revenue or earnings by the average of the quarter ending balances over the specified nine-quarter horizon.

<sup>6</sup> Commercial and industrial loans include small and medium enterprise loans and corporate cards. Other loans include international real estate loans.

<sup>7</sup> Calculated by dividing the nine-quarter cumulative loan and lease losses by the average of the accrual loan and lease balances for each portfolio over the same time period.



FIA Card Services, N.A.

# Supervisory Severely Adverse – FIA Results

- A \$4.4B cumulative pre-tax income was projected over the specified nine-quarter horizon under the Supervisory Severely Adverse scenario.
- Earnings included \$18.9B of PPNR and \$0.5B of other revenues, partially offset by loan losses (\$13.0B) and incremental build in allowance for loan losses (\$2.0B).
- Risk-weighted assets declined primarily driven by reduced loan demand consistent with the macroeconomic conditions of the Supervisory Severely Adverse scenario.
- Results for FIA included expected capital distributions to its parent company over the specified nine-quarter horizon taking into account the impacts of the Supervisory Severely Adverse scenario. Expected FIA capital distributions are subject to regulatory requirements, including regulations 12 USC 60, 12 USC 56 and 12 CFR 5.64. Excluding expected capital distributions from FIA to its parent company, FIA's capital ratios would be higher.
- The Basel 1 Tier 1 Common Capital ratio increases throughout the forecast horizon from 14.7% at September 30, 2013 to an estimate in the Supervisory Severely Adverse scenario of 18.6% at December 31, 2015.
- Under Basel 3 Transition, the estimated lowest stress ratios over the nine-quarter horizon for Common Equity Tier 1 Capital, Tier 1 Capital, Total Capital and Tier 1 Leverage were 16.8%, 16.7%, 18.0% and 12.6%, respectively.



# Supervisory Severely Adverse – FIA Capital, Risk-Weighted Assets, and Balance Sheet

Pro Forma Capital Ratios <sup>1</sup>	Actual Ratios at 9/30/13	Hypothetical Stressed Ratios at 12/31/15	Hypothetical Stressed Minimum Ratios <sup>2</sup>
Tier 1 Common Capital Ratio	14.7%	18.6%	15.7%
Common Equity Tier 1 Capital Ratio	n/a	18.0%	16.8%
Tier 1 Capital Ratio	15.7%	18.7%	16.7%
Total Capital Ratio	17.0%	20.0%	18.0%
Tier 1 Leverage Ratio	11.8%	13.6%	12.6%

Capital/Risk-Weighted Assets \$ in billions	Actual Balances at 9/30/13	Balances at 12/31/15	Balances at Capital Ratio Minimum <sup>3</sup>
Tier 1 Common Capital	\$17.5	\$18.9	\$18.3
Basel 1 Risk-Weighted Assets	119.1	101.4	116.7
Common Equity Tier 1 Capital	n/a	18.7	18.6
Basel 3 Risk-Weighted Assets	n/a	103.8	110.6

Balance Sheet <sup>4</sup> \$ in billions	Actual Balances at 9/30/13	Balances at 12/31/15	Balances at Common Equity Tier 1 Capital Ratio Minimum
Total Assets	157.0	144.2	149.5
Deposits	117.3	116.0	115.8

**Note:** Hypothetical stressed results presented are internal projections for the Supervisory Severely Adverse scenario using the rules and conditions set forth by the FRB and OCC. Capital ratios include the impact of expected capital distributions to its parent company over the specified nine-quarter horizon. Expected capital actions may be subject to regulatory requirements.

<sup>1</sup> Capital ratios are calculated under the applicable Basel regime. Values in 2013 are calculated on a Basel 1 basis. Values in 2014 and 2015 are calculated on a Basel 3 basis in accordance with the transitional arrangements provided in the Basel 3 final rule.

<sup>2</sup> Minimum hypothetical ratio during the specified nine-quarter horizon.

<sup>3</sup> Capital and Risk-Weighted Assets are the balances from the quarter of the minimum capital ratio (Tier 1 Common Capital Ratio for Basel 1 and Common Equity Tier 1 Capital Ratio for Basel 3).

<sup>4</sup> Balances for Total Assets and Deposits are as reported in the DFAST-14A Summary Template for FIA.

# Supervisory Severely Adverse – FIA Net Income Before Taxes and Loan Losses

Net Income Before Taxes \$ in billions	Cumulative Hypothetical Results Over 9 Quarters	% of Average Assets <sup>3</sup>
Pre-Provision Net Revenue <sup>1</sup>	\$18.9	13.1%
Other Revenue <sup>2</sup>	0.5	
Less:		
Provision for Loan Losses	15.1	
Realized Losses on Securities (AFS/HTM)	-	
Trading and Counterparty Losses	-	
Goodwill Impairment	-	
Other Losses	-	
Net Income (Loss) Before Taxes	\$4.4	3.0%

Loan Losses \$ in billions	Cumulative Hypothetical Results Over 9 Quarters	Portfolio Loss Rates (%) <sup>5</sup>
Estimated Loan Losses <sup>4</sup>	\$13.0	12.3%
First Lien Mortgages, Domestic	-	-
Junior Liens and HELOCs, Domestic	-	-
Commercial and Industrial	0.8	14.8%
Commercial Real Estate	0.0	64.7%
Credit Cards	12.0	12.6%
Other Consumer	0.2	10.5%
Other Loans	0.0	0.1%

**Note:** Hypothetical stressed results presented are internal projections for the Supervisory Severely Adverse scenario using the rules and conditions set forth by the FRB and OCC.

<sup>1</sup> Pre-provision net revenue includes losses from operational risk events, mortgage put-back expenses, legal expenses and OREO costs.

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

<sup>3</sup> Calculated by dividing nine-quarter cumulative revenue or earnings by the average of the quarter ending balances over the specified nine-quarter horizon.

<sup>4</sup> Commercial and industrial loans include small and medium enterprise loans and corporate cards. Other loans include international real estate loans.

<sup>5</sup> Calculated by dividing the nine-quarter cumulative loan losses by the average of the accrual loan balances for each portfolio over the same time period.



# Stress Test Methodologies

# Credit Risk Methodologies

## Credit Risk

The risk of loss arising from a borrower's inability to meet its obligations for funded and committed exposures is analyzed by product in the stress testing process. Each product is assessed for charge-offs and allowance using the relevant loan product loss forecasting tools over the specified horizon. Credit risk and losses related to borrower default are projected in the income statement through provision for loan and lease losses.

### Commercial Asset Quality

- The commercial portfolio includes commercial credit exposure across products including Commercial and Industrial and Commercial Real Estate.
- Stress testing uses the same general approach and inputs as the baseline forecast. Additional portfolio losses are captured by stressing transaction risk ratings, resulting in higher probabilities of default and losses. The level of stress is determined by incorporating macroeconomic variables, including GDP, Corporate Bond Spreads, Treasury Spreads, and the S&P 500.
- Quantitatively driven results are analyzed and qualitative adjustments are made related to historical experience, portfolio characteristics, forward views on business initiatives, origination/underwriting strategies, etc.

### Consumer Asset Quality

- The main consumer portfolios include Card Services (U.S. Card, U.K. Card, and Consumer Lending) and Home Loans (First Mortgage, Home Equity).
- The loss forecasting process for Card Services uses models that forecast delinquency performance and probabilities of default to determine additional charge-offs. Key model drivers include unemployment rates and bankruptcies.
- The loss forecasting process for Home Loans is a two part process in which loan level statistical models are utilized to estimate probability of default and loss given default. Severities of losses are based on credit factors, loan terms, and macroeconomic variables such as the Home Price Index and Unemployment. Adjustments may be incorporated to account for short term trends and other management judgments not captured by the statistical models.

# Market and Counterparty Risk Methodologies

## Market and Counterparty Risk

The risk of adverse impacts to asset values and associated counterparty receivables is incorporated through the application of market disruption assumptions applied to marked positions across Trading, Counterparty, Equity Investments, and select Other Asset & Liability Management portfolios. Hypothetical losses are calculated by applying the Supervisory Severely Adverse global market shocks to the relevant on- and off-balance sheet positions in these portfolios.

### Instantaneous Shocks / Trading and Counterparty Losses

- Market risk stress testing estimates and reports the impact to earnings under the Supervisory Severely Adverse scenario, using the prescribed instantaneous market disruption shocks.
- Shocks across the portfolio risk factors (including interest rates, currencies, equities, commodities, and credit spreads) are applied to trading and counterparty positions as of October 16, 2013, per supervisory instruction.
- The scenario P&L impact is included in the first quarter of the forecast period without recovery assumed in the remaining quarters.
- Stress testing of the counterparty risk exposure is designed to assess the counterparty portfolio impact of changes in both market and credit risk conditions. The impact is measured by the change in mark-to-market value of the credit valuation adjustment calculated using the Supervisory Severely Adverse shocks.
- Additional default risk beyond the market risk shocks in the trading portfolio is considered through a counterparty and issuer incremental default risk (“IDR”) calculation at the legal entity level. A single counterparty default replaces the counterparty IDR at the consolidated level for BAC, per supervisory instruction.

# Interest Rate Risk Methodologies

## Interest Rate Risk

Interest rate risk represents the most significant market risk exposure to the core balance sheet and is measured as the exposure of the Company's earnings and capital to adverse movements in interest rates. Client-facing activities, primarily lending and deposit-taking, create interest rate sensitive positions on the balance sheet.

### Net Interest Income

- The Company's core net interest income trajectory is reflected in the scenario as it relates to the interest income from loans, debt securities and other interest-earning assets in addition to the interest expense related to deposits, borrowings, and other interest-bearing liabilities. This incorporates balance sheet assumptions such as loan and deposit growth and pricing, changes in funding mix, product re-pricing and maturity characteristics.
- The Supervisory Severely Adverse scenario captures the potential interest rate stresses to the balance sheet, net interest income and other activities that are sensitive to changes in interest rate levels and yield curves. For example, the Supervisory Severely Adverse scenario incorporates changes to interest rates that are applied across exposures and business activities, resulting in impacts to prepayment on mortgage-related assets and net interest income, among other items.

### Capital

- In addition to net interest income, the other comprehensive income impact to the Asset & Liability Management available for sale ("AFS") securities portfolio and the valuation impact to the mortgage servicing rights portfolio are considered when evaluating interest rate risk. These items and the impact to the Company's deferred tax asset can affect the Company's capital ratios under Basel 3.

# Operational Risk Methodologies

## Operational Risk

The risk of loss resulting from inadequate or failed internal processes, people, systems, events and external fraud is covered and analyzed in each stress test. These risks are independently assessed across our lines of business and operational loss event categories as it relates to both legal (e.g. litigation) and non-legal operational risks.

### Non-legal Operational Loss

- Non-legal losses are included in the revenue and expense projections for each line of business and result in a reduction in PPNR. Historical losses are analyzed to estimate frequency and severity for purposes of the projections. The analysis is performed by assessing historical data by units of measure by line of business and operational loss event categories.
- Non-legal losses are expected to increase across most of the lines of business in stress scenarios given pressure on execution and potential business disruption. Fraud is also expected to increase in most of the consumer lines of business. The frequency and amount is therefore adjusted to increase the losses based on qualitative assumptions around the scenario.

### Litigation Expense

- Incremental litigation expense is analyzed across the company in aggregate and on a case-by-case basis for significant matters. It is included as an increase to projected operational risk losses in the stress scenario, reflected as a reduction in PPNR.

# Other Methodologies

## Pre-Provision Net Revenue

- Net interest income was determined by forecasting asset and liability balances and the related interest income and expense over the specified nine-quarter horizon using the macroeconomic variables.
- Noninterest income and noninterest expense were determined on a business-by-business basis over the specified nine-quarter horizon using the macroeconomic variables that are relevant to each business. Stress losses related to operational risk events, including mortgage representation and warranties and legal costs, are included within PPNR.
- Personnel expense calculations using the FRB-prescribed methodology for the Supervisory Severely Adverse scenario did not incorporate personnel expense reductions in conjunction with the market and counterparty disruptions.

## Provision for Loan and Lease Losses

- Commercial and consumer charge-off projections were developed using probability of default and loss given default models that are calibrated and back-tested to reflect historical performance of Bank of America's portfolios, including experience during the 2008 recession. The models utilize the macroeconomic variables that are relevant to each portfolio (including Unemployment, Gross Domestic Product, and the Home Price Index).
- The allowance for loan and lease losses, and related reserve build or release, was projected for each quarter over the specified nine-quarter horizon by assessing the adequacy of the reserve under the macroeconomic conditions in the Supervisory Severely Adverse scenario.
- Stress test projections for charge-offs and allowance for loan and lease losses incorporate the same forecasting models and processes that BAC utilizes for ongoing risk management and financial forecasting.



# Other Methodologies (continued)

## Losses

- Realized losses on securities available for sale and held to maturity (“HTM”) were assessed for other than temporary impairment (“OTTI”) each quarter over the specified nine-quarter horizon by assessing the securities under the macroeconomic assumptions in the Supervisory Severely Adverse scenario.
- Trading and counterparty losses were calculated by applying the FRB’s Supervisory Severely Adverse global market shock variables to the relevant on- and off-balance sheet trading positions as of October 16, 2013.
- Goodwill impairment was assessed by reporting unit using the hypothetical stressed income statement results.
- Other losses excluding goodwill are primarily related to loans held under fair value accounting where projections are based on the macroeconomic assumptions in the Supervisory Severely Adverse scenario without reference to the global market shock.

## Capital

- Adjusted capital actions under the required assumptions defined by the DFA stress testing rules, include but are not limited to, the following:
  - Inclusion of actual capital actions as of the end of the first forecasted quarter (4th quarter 2013).
  - Common stock dividends equal to the quarterly average dollar amount of common stock dividends paid in the previous year (that is, the initial quarter of the planning horizon and the preceding three calendar quarters).
  - Payments on other instruments that are eligible for inclusion in the numerator of a regulatory capital ratio equal to the stated dividend, interest, or principal due on such instruments during the periods presented.
  - No redemption or repurchase of any capital instrument that is eligible for inclusion in the numerator of a regulatory ratio, subsequent to the first forecasted quarter.

# Required Minimum Capital Ratios

- The FRB provided minimum required levels for five regulatory capital ratios. Bank of America's capital ratios, after incorporation of capital actions, must remain above these levels:

Required Minimum Capital Ratios <sup>1</sup>	Q4 2013	2014	2015
Tier 1 Common Capital Ratio	5.0%	5.0%	5.0%
Common Equity Tier 1 Capital Ratio	n/a	4.0%	4.5%
Tier 1 Capital Ratio	4.0%	5.5%	6.0%
Total Capital Ratio	8.0%	8.0%	8.0%
Tier 1 Leverage Ratio	3 or 4% <sup>2</sup>	4.0%	4.0%

<sup>1</sup> The Tier 1 Common Capital Ratio is calculated using the definitions of Tier 1 Common Capital and total risk-weighted assets in effect in 2013. All other ratios are calculated in accordance with the transition arrangements provided in the FRB's revised capital framework, issued in July 2013.

<sup>2</sup> 3% as applicable to BAC, 4% as applicable to BANA and FIA

**Bank of America**



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