

# **HSBC North America Holdings Inc.**

## **2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results**

Date: September 15, 2014



# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

<b>TABLE OF CONTENTS</b>	<b>PAGE</b>
1. Overview of the mid-cycle company-run Dodd-Frank Act stress test.....	1
2. Description of the internal severely adverse scenario.....	1
3. Forecasting methodologies utilized for mid-cycle company-run Dodd-Frank Act stress test .....	2
4. Mid-cycle company-run Dodd-Frank Act stress test results .....	4

# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

*This document has been prepared pursuant to the disclosure requirements set out in the regulations issued by the Board of Governors of the Federal Reserve System ('Federal Reserve') under the Dodd-Frank Wall Street Reform and Consumer Protection Act ('Dodd-Frank Act') related to the mid-cycle company-run stress testing exercise.*

*References to 'HSBC' are to HSBC North America Holdings Inc. and its subsidiaries.*

*This document makes certain references that are not historical facts, including statements about HSBC's beliefs and expectations, which are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as 'may', 'will', 'should', 'would', 'could', 'appears', 'believe', 'intends', 'expects', 'estimates', 'targeted', 'plans', 'anticipates', 'goal' and similar expressions are intended to identify forward-looking statements but should not be considered as the only means through which these statements may be made. These matters or statements will relate to our future financial condition, economic forecast, results of operations, plans, objectives, performance or business developments and will involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from that which was expressed or implied by such forward-looking statements. The projections disclosed in this document should not be viewed or interpreted as forecasts of expected outcomes or capital adequacy or of the actual financial condition of HSBC. Rather, these projections are based solely on the hypothetical adverse scenarios and other specific conditions required to be assumed by HSBC for the purpose of Dodd-Frank Act stress testing as well as modeling assumptions necessary to project and assess the impact of the various adverse scenarios on HSBC's capital position. Forward-looking statements speak only as of the date of this document. HSBC makes no commitment to revise or update any forward-looking statements to reflect events or circumstances occurring or existing after the date of any forward-looking statements. Factors that could cause HSBC's actual results to differ materially from those described in forward-looking statements can be found in the Annual Report on Form 10-K for HSBC USA Inc. and HSBC Finance Corporation. Additionally, please refer to the HSBC USA Inc. Annual Report on Form 10-K for a broader description of our capital planning and risk management processes.*

# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

### 1. Overview of the mid-cycle company-run Dodd-Frank Act stress test

Pursuant to the Dodd-Frank Act, the Federal Reserve has issued regulations requiring supervisory and company-run stress testing ('Dodd-Frank stress tests') to be conducted for Bank Holding Companies ('BHCs') with average total consolidated assets of US\$50 billion or more, including HSBC North America Holdings Inc. ('HSBC North America').

HSBC North America is required to conduct a mid-cycle company-run stress test to assess the impact of its internally developed hypothetical macroeconomic baseline, adverse and severely adverse scenarios on its financial condition and capital adequacy over a nine quarter planning horizon beginning, for the current exercise, in the second quarter of 2014. HSBC North America provides herein the disclosure of the results of its 2014 mid-cycle company-run stress test exercise, under its internally developed severely adverse stress scenario ('severely adverse scenario'), as required to be prepared and submitted to the Federal Reserve by July 7, 2014 under these regulations.

HSBC North America is the holding company for HSBC Holdings plc's operations in the United States. Those operations are primarily conducted through HSBC Bank USA, N.A., HSBC Finance Corporation, a holding company for certain run-off consumer finance businesses, and HSBC Markets (USA) Inc. which is the intermediate holding company of, inter alia, HSBC Securities (USA) Inc., a registered broker dealer.

HSBC Holdings plc is one of the world's largest banking and financial services organizations. With over 6,300 offices in both established and faster-growing markets, it aims to be where growth is, connecting customers to opportunities, enabling businesses to thrive and economies to prosper, and ultimately helping people to fulfil their hopes and realize their ambitions.

The results of HSBC North America's mid-cycle company-run Dodd-Frank stress test are shown below in section 3.

### 2. Description of the internal severely adverse scenario

HSBC North America's mid-cycle internal severely adverse scenario is characterized by the assumption of a severe recession starting in the second quarter of 2014 and continuing for four quarters. Real GDP growth rate is projected to fall to a low of negative 8.9% in the third quarter of 2014. The national unemployment rate is forecast to build to a peak of 11.3% in the third quarter of 2015 and improve slowly thereafter. Accelerating housing foreclosures are assumed to set off another major cycle of house price declines with house prices, as measured by the Federal Housing Finance Agency All Transactions home price index, assumed to decline sharply to a low point approaching negative 10% in the first quarter of 2015. Commercial real estate prices are assumed to fall by more than 20% from the starting level in the first quarter of 2014.

In addition, there is an assumption of deflation from the last quarter of 2014 through to the beginning of 2016 due to weakness in consumer spending. As a result, the forecast expectation is that the Federal Reserve would maintain interest rates close to zero until mid-2015. Similarly, the yield on the 10-year Treasury is assumed to fall to 1.7% in the last quarter of 2014 and recover only modestly thereafter. The significant economic contraction in this scenario would be expected to impact the commodity and capital markets with the price of crude oil assumed to fall by more than 30% and the stock market falling sharply in the second quarter of 2014, with a peak-to-trough decline of 50%. It is important to note that the scenario is not a forecast, but rather a

# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

hypothetical scenario used to assess the strength and resilience of HSBC North America in a stressed economic and financial market environment.

### 3. Forecasting methodologies utilized for mid-cycle company-run Dodd-Frank Act stress test

Our stress testing methodologies focus on empirically defining the relationship between macroeconomic variables and business volumes, revenues and losses in order to estimate outcomes that may result from a specific adverse scenario. We use a series of models and estimation methodologies, coupled with management judgment and overlays to modeled results to take account of HSBC North America's specific risk profile, to produce a comprehensive estimate of future business performance. Stress testing methodologies are subject to considerable uncertainties and modeling limitations, including uncertainty about the extent to which historical relationships between macroeconomic factors and business outcomes will continue to be relevant in a severely stressed economic environment and the potential for changes to consumer behavior in response to changes in the environment. We regularly consider uncertainties and the limitations of our estimates when evaluating stress test results. The methodologies apply accounting practices consistent with HSBC's significant accounting policies, generally accepted accounting principles in the U.S., and apply the regulatory capital rules as set out in the Dodd-Frank stress test regulations.

The forecast methodologies employed by HSBC to quantify the impact of the hypothetical assumptions over the stress testing forecast period, included, but were not limited to, the following:

#### **Pre-provision net revenue**

HSBC's revenue forecast, under the internal severely adverse scenario, reflected a detailed process in which business segment projections were developed over the nine-quarter capital planning horizon. These forecasts incorporated the impact on modeled net interest income, as well as non-interest income and non-interest expense of the hypothetical macroeconomic and market environment prescribed under the scenario. The scenario revenue forecast also reflected the level of resources projected to be employed by each business segment over the capital planning horizon, as well as HSBC's expectations of customer behavior and competitive dynamics. Pre-provision net revenue also included forecast movements in the lower of amortized cost or fair value adjustments on the fair value of real estate receivables held for sale in HSBC Finance Corporation.

#### **Balance Sheet**

The forecast balance sheet, under the internal severely adverse scenario, reflected projected changes over the planning horizon based on assumptions of the macroeconomic environment in the scenario, business growth and planned activity, changes to carry values resulting from mark-to-market and other balance sheet impacts, including draws on unfunded commitments and the roll-off of secured and unsecured funding.

#### **Losses**

Stress losses from market risk, wholesale and retail credit risk and operational risk exposures across HSBC, under the internal severely adverse scenario, were measured utilizing the following methodologies:

*Market Risk:* Market risks included all mark-to-market positions and loans carried at fair value (the latter primarily in HSBC Finance Corporation). The potential impact of market movements on trading positions and

# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

mark-to-market losses for fair-value assets not held in the trading book, including loans held for sale or held for investment under the fair-value option, projected in the scenario were incorporated, as appropriate.

Our approach to projecting market risk trading losses in a stress environment was based upon specifying macroeconomic shifts and observing and incorporating their impacts into HSBC's forecast performance. The market risk trading stress was computed using a full revaluation methodology in which the portfolio was fully re-priced under the stress risk factor assumptions.

*Credit Risk:* Loans to our customers are a significant component of HSBC's total assets and their related credit risk is among the most significant risks we manage. When estimating loan losses, probability of default, exposure at default, and loss severity assumptions are incorporated into the loan loss estimates. Loss estimates take into consideration the unique characteristics of our wholesale and retail loan portfolios and reflect the run-off nature of the retail loan portfolio in HSBC Finance Corporation.

A variety of models were used to project losses on loans. These models take into consideration many factors, including historical performance, the forecast economic scenarios, current credit characteristics, and loan-level credit quality ratings. Where appropriate, we incorporated country-specific, state and local economic variables to reflect geographical concentrations within a given loan portfolio.

Wholesale loss estimates were made at the asset type level, specifically between commercial & industrial and commercial real estate portfolios. Within each of these, the portfolio was segmented further to capture key portfolio risk characteristics that may react differently under various stress scenarios. Rigorous statistical techniques were used to determine and estimate relationships between probability of default and macro-economic factors. Probability of default projections are sensitive to and consistent with scenario conditions, resulting in loss rates that are indicative of underlying economic fundamentals. Loss severity was projected using similar techniques.

Losses on retail loans were projected using portfolio-based econometric vintage models that use economic attributes (such as unemployment rate, gross domestic product, housing price level and year-over-year change in housing prices) to condition delinquency-status migration patterns and estimate loss. Estimated troubled debt restructuring volumes and life of loan reserves, most significant to loans made by HSBC Finance Corporation, were stressed quarterly throughout the observation period.

*Operational Risk:* Operational risk loss estimates were calculated through multiple approaches, including trending of historical performance, management judgment and statistical modeling to project operational losses in a stress environment. Currently, our statistical modeling process for operational risk losses utilizes our Basel II Advanced Measurement Approaches framework and statistical techniques to estimate correlation relationships between changes in specific macroeconomic variables on operational loss frequency and resulting potential future operational risk losses. The forecast operational risk losses include the estimation of litigation costs, as set out in the Comprehensive Capital Analysis and Review ('CCAR') 2014 requirements, under the internal severely adverse scenario.

### **Capital position**

The capital position of HSBC North America was forecast using the projected revenue and loss estimates described above and risk-weighted assets forecast under its internal severely adverse scenario. Tier 1 common, common equity tier 1, tier 1, total capital and tier 1 leverage ratios were then projected over the nine-quarter stress testing forecast period.

# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

In accordance with the Federal Reserve's regulations, the tier 1 common ratio was calculated under the Basel I rules in effect in 2013. Following the implementation of the Basel III capital framework in the U.S. from January 1, 2014, all other capital ratios have been calculated in accordance with the transition provisions of the Basel III rules, including the introduction of standardized risk-weighted assets from January 1, 2015.

#### 4. Mid-cycle company-run Dodd-Frank Act stress test results

The results of our 2014 mid-cycle company-run Dodd-Frank stress test are shown below. The forecasts include prescribed assumptions, as required under the Dodd-Frank stress testing requirements, in respect of the capital actions projected over the planning horizon: (i) no issuances or redemptions of regulatory capital instruments, (ii) no payment of common stock dividends (based on previous year actual experience), and (iii) payments on any other regulatory capital instruments are equal to the stated dividend, interest or principal due on such instrument in the quarter. The estimates should not be seen as forecasts of expected outcomes or capital adequacy or of the actual financial condition of HSBC North America. The forecasts for HSBC North America may not necessarily be in alignment with those of other institutions or the Federal Reserve because of differences in modeling techniques, methodologies and assumptions made.

The changes in forecast regulatory capital ratios are driven by increased loan losses, unfavorable movements in the lower of cost or fair value adjustments on real estate receivables held for sale in HSBC Finance Corporation and operational risk losses, largely due to litigation events. Despite the projected declines in net income, we forecast a tier 1 common ratio well above the 5% benchmark minimum ratio established under the Federal Reserve's capital plan rule. As shown in Table 1, the other minimum regulatory capital ratios are forecast to be above all regulatory minimum ratios.

The following tables show projected regulatory capital ratios, projected losses, revenues and net income before taxes and projected loan losses by loan type for HSBC North America under its internal severely adverse scenario.

# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

**Table 1:** HSBC North America projected minimum regulatory capital ratios and tier 1 common ratio, 2Q14 to 2Q16, and the required regulatory minimum capital ratios for 2014 mid-cycle company-run Dodd-Frank stress test

Projected stressed capital ratios through Q2 2016						
	Required regulatory minimum capital ratios			Actual Q1 2014	Stressed capital ratios	
	2014	2015	2016 <sup>1</sup>		Q2 2016	Minimum <sup>2</sup>
Tier 1 common ratio <sup>3</sup>	5.00%	5.00%	5.00%	14.32%	8.32%	8.32%
Common equity tier 1 capital ratio	4.00%	4.50%	4.50%	16.10%	8.74%	8.74%
Tier 1 risk-based capital ratio	5.50%	6.00%	6.00%	17.19%	8.87%	8.87%
Total risk-based capital ratio	8.00%	8.00%	8.00%	25.98%	15.51%	15.51%
Tier 1 leverage ratio	3% or 4%	4.00%	4.00%	8.02%	5.73%	5.73%

- 1 For 2016, a capital conservation buffer of 0.625 percent will be added to the minimum ratios above (excluding the tier 1 common and tier 1 leverage ratios).
- 2 The minimum capital ratios represent the lowest projected ratio in the period Q2 2014 to Q2 2016 and do not necessarily occur in the same quarter.
- 3 The tier 1 common ratio is calculated, for all quarters, under the Basel I rules in effect in 2013. All other ratios are calculated in accordance with the transition provisions set out in the Federal Reserve's revised capital framework implementing Basel III. Risk-weighted assets are calculated under the Basel I rules for 2014 and under the Basel III standardized approach from January 1, 2015 onwards.



# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

**Table 2:** HSBC North America projected losses, revenues and net loss before taxes for the nine quarters

Projected losses, revenue, and net loss before taxes, Q2 2014 - Q2 2016	
	Billions of dollars
Pre-provision net loss <sup>1</sup>	(2.60)
<i>less</i>	
Provisions	4.07
Realized losses/gains on securities (AFS/HTM) <sup>2</sup>	0.18
Trading and counterparty losses <sup>3</sup>	0.00
Other losses/gains <sup>4</sup>	(0.63)
<i>equals</i>	
Net loss before taxes	(6.22)

- 1 Pre-provision net loss includes losses from operational-risk events, mortgage repurchase expenses, unfavorable movements in the lower of amortized cost or fair value adjustments on the fair value of real estate receivables held for sale and other real estate owned ('OREO') costs.
- 2 Represents available-for-sale ('AFS') securities.
- 3 Trading and counterparty losses include mark-to-market and credit valuation adjustments ('CVA') and losses arising from the counterparty default scenario component applied to derivatives, securities lending and repurchase agreement activities. HSBC North America is not subject to the global market shock component or counterparty default scenario component of the stress test.
- 4 Other losses/gains include projected change in fair value of loans held for sale and loans held for investment measured under the fair-value option.

# HSBC North America Holdings Inc.

## 2014 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

**Table 3:** HSBC North America projected loan losses, by loan type for the nine quarters

Projected loan losses, by type of loan, Q2 2014–Q2 2016		
	Billions of dollars	Portfolio loss rates (%) <sup>1</sup>
Loan losses		
First-lien mortgages, domestic	1.41	3.7%
Junior liens and HELOCs, domestic	0.65	15.6%
Commercial and industrial <sup>2</sup>	1.59	4.7%
Commercial real estate, domestic	0.67	7.7%
Credit cards	0.11	13.3%
Other consumer <sup>3</sup>	0.02	3.8%
Other loans	0.10	0.7%

1 Cumulative loss rates calculated over the nine-quarter planning horizon as a percentage of average loan balances (excluding loans held for sale and loans held for investment under the fair-value option).

2 Commercial and industrial loans include small and medium enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

